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PERSONAL.

Mr. Robert Kerr, Manager of the Kerr Engine Co., has been elected Mayor of Walkerville, Ont.

Mr. Ernst Weiner, New York Manager of the German house of Arthur Koppel, manufacturer of narrow gage railway material, has returned from Europe.

Mr. Jesmond Taylor Nicholson, mechanical engineer, with the Vulcan Iron Works, Wilkes-Barre, Pa., was married Feb. 8 to Miss Fannie W. Bate, of that city.

Mr. John Carosis, Chief Engineer of the Electrical Department of Leber & Meyer, Buenos Ayres, Argentine Republic, has arrived in New York city on business for his firm. His headquarters are at 5 William St.

Mr. George S. Davison, M. Am. Soc. C. E., of the firm of Wilkins & Davison, civil engineers, of Pittsburg, Pa., has gone to Mexico to act as Consulting Engineer for the Pittsburg interests in the projected Parral-Durango R. R. He will be gone until April 1.

Messrs. Jas. A. Woodruff, Wm. Kelly, Horton W. Stickle, Lewis H. Rand, Edward M. Markham and Thomas H. Jackson, graduates of the United States Military Academy, West Point, N. Y., in this year's class, have been assigned to the Corps of Engineers, U. S. Army.

Major Francis L. Hills, M. Am. Soc. C. E., formerly Chief Engineer of the Wilmington & Northern R. R., of Wilmington, Del., has been appointed Chief of the Bureau of Public Works of Porto Rico and will have charge of roads and bridges, water-works and other engineering works.

Mr. Alfred Courtney Lewerenz, Jun. Am. Soc. C. E., formerly Assistant Engineer on the Buffalo, Rochester & Pittsburgh Ry., Mr. Ernest P. Goodrich, of Michigan, and Mr. Leonard M. Cox, of Kentucky, have been nominated by President McKinley as Civil Engineers in the United States Navy.

Mr. Myron T. Herrick, formerly Receiver for the Wheeling & Lake Erie Ry., with headquarters in Cleveland, O., has been elected President of that road to succeed Mr. A. G. Blair. Mr. D. Adams, Local Treasurer of the company, with offices in Toledo, O., has been elected Assistant Secretary and Treasurer.

OBITUARY.

Mr. Hiram L. Dickinson, contractor, of Mount Kisco, N. Y., died Feb. 15.

Mr. Michael S. Rockey, pump manufacturer, of Columbus, O., died there, Feb. 15, aged 80.

Mr. Edwin Stanton Carpenter, of the Westinghouse Electric & Mfg. Co., Pittsburg, Pa., died in New York city last week, aged 37.

Mr. W. H. Parker, architect, of La Crosse, Wis., died Feb. 11, aged 44. He was a graduate of Cornell University, Ithaca, N. Y., and had also studied in Europe.

Mr. Wm. F. Cunningham, Chief Engineer of the School Board of Brooklyn, N. Y., died Feb. 18, aged 60. We was born in that city and had held the above position for 25 years.

Mr. Samuel J. Anthony, who was instrumental in introducing the use of water gas into this country, died in Long Branch, N. J., Feb. 17, aged 60. He was born in Duncannon, Pa.

Mr. Peter W. Neu, of the firm of Heidmaier & Neu, contractors, of Chicago, Ill., was killed recently in California, where his firm had the contract for the San Pedro Harbor improvement.

Capt. Geo. R. Talcott, Corps of Engineers, U. S. Army, in charge of the James River Improvements, died in Richmond, Va., Feb. 18. He was a son of Col. Andrew Talcott, the civil engineer who built the Richmond & Danville Ry., now a part of the Southern Ry.

Mr. John A. McMurtrie, railway contractor, of Denver, Colo., died there Feb. 16, aged 50. He was born in Mauch Chunk, Pa., and built the Rio Grande R. R. over Marshall Pass and through the Grand Canon of the Arkansas. At the time of his death he was engaged in building an extension for the Southern Pacific Ry. in California.

Mr. Lewis Miller, inventor of agricultural machinery and implements, and a member of C. Aultman & Co., Canton, O., and Aultman, Miller & Co., of Akron and Mansfield, O., died in the Post-Graduate Hospital, New York city, Feb. 17, after a surgical operation. He was born in Greentown, O., in 1829, and learned the machinist trade. He started a shop in Canton, O., and devoted himself to inventing agricultural machinery, being the first one, it is said, to produce a practical reaping and binding machine. He established the three plants mentioned above, which are employed in the manufacture of agricultural and other machinery. Mr. Miller was one of the founders of the Chautauqua Assembly in 1874, and was its President from that time until his death.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

AMERICAN INSTITUTE OF MINING ENGINEERS.
Feb. 21-25. Annual meeting, New York city. Secy., R. W. Raymond, P. O. box 223, New York city.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Feb. 28. Secy., Wm. H. Searles, Case Library Building, Cleveland.

ASSOCIATION OF ONTARIO LAND SURVEYORS.
Feb. 28. Annual meeting, Toronto, Canada. Secy., A. J. Van Nostrand, Toronto, Canada.

FOUNDRYMEN'S ASSOCIATION (Philadelphia).
March 1. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
March 1. Secy., C. W. Hunt, 220 West 57th St., New York city.

WESTERN SOCIETY OF ENGINEERS.
March 1. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

CHICAGO ELECTRICAL ASSOCIATION.
March 3. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
March 3. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
March 3. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

ENGINEERS' CLUB OF COLUMBUS.
March 4. Secy., H. M. Gates, 12½ North High St., Columbus, O.

ENGINEERS' CLUB OF PHILADELPHIA.
March 4. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' CLUB OF ST. LOUIS.
March 5. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
March 6. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
March 6. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

AMERICAN INSTITUTE OF ARCHITECTS (New York Chapter).
March 8. Secy., Chas. I. Berg, 10 West 23d St., New York city.

FRANKLIN INSTITUTE.
March 8. Some Features in the Structural Design of Buildings," Prof. Wm. H. Burr; March 9. Discussion, "Mechanical Applications of Compressed Air." Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

BROOKLYN ENGINEERS' CLUB.
March 9. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ENGINEERING ASSOCIATION OF THE SOUTH.
March 9. Secy., H. M. Jones, 1000 Broad St., Nashville, Tenn.

CENTRAL RAILWAY CLUB.
March 10. Secy., H. D. Vought, 114 Fifth Ave., New York city.

ST. LOUIS RAILWAY CLUB.
March 10. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

WISCONSIN STATE CHEMICAL ASSOCIATION.
March 10. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

MONTANA SOCIETY OF ENGINEERS.
March 11. Helena, Mont. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

THE LOUISIANA ENGINEERING SOCIETY.
March 13. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

ENGINEERS' CLUB OF KANSAS CITY.
March 13. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

DENVER SOCIETY OF CIVIL ENGINEERS.
March 14. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

NORTHWEST RAILWAY CLUB.
March 14. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

NEW ENGLAND RAILWAY CLUB.
March 14. Secy., Edw. L. Janes, P.O. Box 1158, Boston, Mass.

RAILWAY SIGNALING CLUB.
March 14. Secy., C. O. Tilton, C. M. & St. P. Ry., West Milwaukee, Wis.

BOSTON SOCIETY OF CIVIL ENGINEERS.
March 15. Secy., S. H. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
March 15. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

NEW YORK RAILROAD CLUB.
March 16. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
March 16. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

ENGINEER'S CLUB OF CINCINNATI.
March 16. Secy., J. F. Wilson, P. O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
March 16. Secy., F. A. Charplot, P. O. Box 13, Savannah, Ga.

ROCHESTER ENGINEERING SOCIETY.
March 17. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY.
March 17. Secy., Henry Goldmark, Wayne, Co. Savings Bank Bldg., Detroit, Mich.

NORTHWESTERN TRACK AND BRIDGE ASSOCIATION.
March 17. Secy., D. W. Meeker, St. Paul, Minn.

ENGINEERS' CLUB OF MINNEAPOLIS.
March 20. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

TECHNICAL CLUB OF OMAHA.
March 20. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
March 20. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

WESTERN RAILWAY CLUB.
March 21. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA
March 21. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
March 29. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

WISCONSIN ENGINEERS' SOCIETY.
March 30. Annual meeting, Appleton, Wis., Secy., F. J. Harriman, Appleton, Wis.

ROCHESTER ENGINEERING SOCIETY.—At the regular meeting of this society, held on Feb. 17, a series of stereopticon views, obtained by a tourist at the Columbian Exposition and elsewhere in the world, were exhibited and explained.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—A meeting of the Institute was held in New York city, on Feb. 15. The paper of the evening, on "Storage Batteries and Railway Power Stations," was presented by Mr. Robert McA. Lloyd, of New York city. An abstract of this paper is given elsewhere in this issue.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—A regular meeting of this society was held at the Society House, New York city, on Feb. 15. Mr. E. L. Corthell, M. Am. Soc. C. E., presented a paper entitled "The Approaches and Transportation Facilities of the Paris Exposition of 1900," and exhibited a series of lantern views.

THE OHIO TILE, BRICK AND DRAINAGE ASSOCIATION.—The annual meeting of this association was held at Columbus, Ohio, on Feb. 9. The paper of the evening, on "Storage Batteries and Railway Power Stations," was presented by Mr. Robert McA. Lloyd, of New York city. An abstract of this paper is given elsewhere in this issue. The election of officers for the ensuing year resulted as follows: Pres., J. W. Everall, Westerville; Vice-Pres., W. C. Wilson, Brice; Secy., Edw. F. Darnell, Grove City; Treas., W. B. McClure, Warsaw. The next annual meeting will be held at the Southern Hotel, Columbus, O., on the second Tuesday of February, 1900.

THE NEW YORK BUILDING CODE COMMISSION appointed by the Municipal Assembly to revise the building laws of the city of New York has held several sessions. Invitations to attend the future meetings will be sent to the municipal departments of New York, the technical societies and others interested in building. Objections to the present laws and suggestions to aid the work of revision are asked for by the commission. Public hearings will be held at convenient locations in the different boroughs of the city. Building Commissioner Rudolph L. Daus is Secretary to the Commission.

NATIONAL BRICK MANUFACTURERS' ASSOCIATION.—The annual meeting of this association was held at Columbus, Ohio, Feb. 7-10. Among the papers read were the following: "The Commercial Side of the Brick Business," T. P. Plumridge, St. Louis; Report of the Committee on "Statistics and the Value of Brick as a Building Material;" "Real vs. Imitation Fireproofing," W. C. Denison; "Burning Brick in Down Draft Kilns," Robert Towles, Wickliffe, O.; "What I Don't Know About Brickmaking," Wm. G. Morrell, Gardner, Me.; "A New Method of Testing Brick," Garner Jones; "The Evolution of the Paving Brick," H. A. Wheeler, St. Louis, Mo.

THE CIVIL ENGINEERS' CLUB OF CLEVELAND.—At the regular meeting, held Feb. 14, Prof. Robert H. Fernald read a paper entitled "Experiments on the Efficiency of Bicycles," describing investigations made at the Case School of Applied Science, and giving the conclusions. Comparisons were drawn between chain and chainless bicycles, racing and road wheels, between sprockets of different size, and between tires under different pressures. Diagrams showing relative efficiency were exhibited. Professor Fernald stated that the experiments would be continued and others made under road conditions. The duration of cone and ball bearings would be tested, and the effect of vibration on frames, and the efficiency of different grades of tires at different velocities determined. W. H. Searles, Secy.

ENGINEERS' CLUB OF ST. LOUIS.—The 485th meeting of this club was held Feb. 15, with 63 members and visitors present. Mr. Bryan was elected as member of the Board of Managers of the Association of Engineering Societies.

Mr. M. L. Holman opened the discussion of the evening on the "Chicago Drainage Canal," giving a brief description of main features of Chicago's sewerage system, the Chicago River and the canal itself. He also read parts of the law giving the provisions for the construction and taxation to pay for the work.

Mr. R. E. McMath explained the relation of the Desplaines River, the Illinois and Mississippi Canal and the drainage canal. He also discussed some of the early attempts of Chicago to gain relief from its sewage. The effect of the canal in a commercial way was touched upon.

Mr. Holman described some of the engineering fallacies of the scheme as undertaken. He stated that the original plans had not been followed out, and mentioned that the Chicago engineers themselves do not see the way clear to successful fulfillment of the original expectations.

E. R. Fish, Secy.

NATIONAL ASSOCIATION OF MUNICIPAL ELECTRICIANS.—The next annual meeting of this association will be held at Wilmington, Del., on Sept. 5-6. The following are some of the papers to be presented: "The Laws and

Government of the Wire Department of Boston," Thomas W. Flood, Boston; "Licensing of Employees Engaged in Electrical Work and the Improvement of the Quality of Work and Material," Capt. William Brophy, Boston; "Advisability of Concentrating the Control of all Municipal Electrical Interests Under One Head," Morris W. Mead, Pittsburg; "The Underground System as Applied to the Fire Alarm Telegraph," S. L. Wheeler, Springfield, Mass.; "The Police Signal System of Boston," John Weigel, Boston; "Aerial Construction of Fire and Police Telegraph Lines," W. H. Thompson, Richmond, Va.; "Progress and Development of the Municipal Electrical Interests of Canada," G. F. MacDonald, Ottawa, Canada.

FRANKLIN INSTITUTE.—At the regular meeting of the Mining and Metallurgical Section, held on Feb. 8, Mr. John M. Hartman, Philadelphia, Pa., read a paper entitled "Notes on the Reduction of Iron Ores." Another paper on "Subterranean Ice Deposits in America" was presented by Mr. Edwin Swift Balch, also of Philadelphia. Mr. Hartman reviewed the past and present practices involved in the reduction of iron ores, giving detailed accounts of the various ores in use and methods of reducing iron from same.

G. H. Clamer, Secy., M. and M. Section.

At the meeting of the Mechanical and Engineering Section, held on Feb. 9, "Traveling Cranes" was the topic for discussion. Mr. A. E. Outerbridge, Jr., gave a resume of the history of cranes dating back to the time of the pyramids and continuing to the 150-ton two-trolley electric crane of recent construction. The economies of shunt and series electric motors, and the relative advantages of different construction of the crane bridges and trolleys in different styles of building construction, also the safety lowering devices, were discussed in the paper and also by the members present who were concerned in the operation and application of cranes for many different purposes.

Daniel Eppelsheimer, Secy., M. and E. Section.

NEW ENGLAND SOCIETY OF GAS ENGINEERS.—The 29th annual meeting of this association was held at Young's Hotel, Boston, Mass., on Feb. 16-17. Various reports were read showing the association to be in a good condition from all standpoints. President S. J. Fowler then read his inaugural address. In this the developments of the past year were reviewed from the gasmakers' standpoint, and the thriving condition of the gas industry well shown. Attention was called to the continued concentration of people into communities, and the growth of the cities and towns of New England was pointed out. This growth, while perhaps unfortunate from the Utopian standpoint, was most beneficial to the gas manufacturers.

Prepayment meters, while meeting with considerable success in the thickly populated poor sections of English cities, do not seem to take in this country, where overcrowding does not exist, at least in the smaller cities. Incandescent gas lighting seems to be growing in favor, although slowly, owing to the fragile character of the mantles, and to the action of the company controlling the patents under which the mantles are manufactured.

The acetylene industry is apparently growing slowly but surely, judging from the increased manufacture of calcium carbide. From the gas manufacturers' standpoint, its use for certain purposes, such as car lighting, is beginning to be felt, but as a general illuminant it does not yet enter into competition at all.

Mr. Fowler briefly described the experiments now being conducted by the New England Gas & Coke Co., which is carbonizing coal to produce coke and gas, saving all the coke and only half (or less) of the gas instead of following the usual practice of saving all of the gas and only two-thirds of the coke. The object being to furnish coke for domestic purposes where hard coal is expensive, but where the disadvantage of soft coal will not permit its use. Following the president's address these papers were read: "A Paper Unnamed," T. H. Hintz, Malden, Mass.; "Distributing Gas at Pressure Higher Than Usually Obtained With a Gas Holder," B. J. Allen, Brookline, Mass.; "Notes on the Design and Extension of a Gas Plant," J. J. Humphreys, Worcester, Mass.; "Correspondence Schools," C. A. Humphreys, New York city; "Advertising," H. K. Morrison, Concord, N. H.; "Considerations Affecting the Choice of Location of a Gas Works," F. C. Shelton, Philadelphia, Pa.; "Notes on the Use of Superheated Steam for Burning Carbon from Retorts," N. W. Gifford, New Bedford, Mass.; "Steam," W. E. McKay.

The following officers were elected for the ensuing year: Pres., Walter R. Addicks, Boston, Mass.; First Vice-Pres., W. A. Learned, Newtown, Mass.; Second Vice-Pres., W. E. McKay, Boston, Mass.; Secy. and Treas., N. W. Gifford, New Bedford, Mass.; Directors, Jno. A. Coffin, Frank S. Richardson, A. J. Purinton, W. McGregor and W. G. Africa.

ASSOCIATION OF ONTARIO LAND SURVEYORS.—The 7th annual meeting of this association will be held at the Repository, Parliament Bldg., Toronto, Canada, on Feb 28-March 2. The following is the program of the meeting:

Feb. 28.—Meetings of committees and reports of officers and standing committees; also reports from the committees on "Publication;" "Repository and Biography;" "Polar Research." The following papers will be read: "Permanent Way," W. E. McMullen, St. John, N. B.; "Progress of Gold Mining in the Central Belt of the Rainy River District," H. W. Selby, Dinorwic; "Surveying in the Mining Lands of Ontario," F. I. Foster, Mine Centre; "Dominion Land Surveys," C. F. Aylsworth, Jr., Madoc; "More Reminiscences of an Old Land Surveyor," C. Unwin, Toronto; Report of Committee on Exploration; "Some Incidental Benefits from the Growth of Forests," Thomas Southworth, Toronto; "Azimuths," L. B. Stewart, Toronto; "Explorations," James Dickson, Fenelon Falls.

March 1.—Report of the Committee on Engineering, with Question Drawer; "Highway Culverts and Bridges," A. W. Campbell, Toronto; "The Calculation of Strains in Bridge Trusses," James Warren, Walkerton; "Railway Location Work," J. D. Evans, Trenton; Report of Committee on Land Surveying, with Question Drawer; "Our Professional Standing," B. J. Saunders, Fort William; "Survey of the Boundary Line Between Nipissing and Algoma Districts," A. Niven, Haliburton; "A Trip to the Yukon and Return," Lewis Bolton, Listowel; "The Registry Act," P. S. Gibson, Willowdale; "Open Questions," H. J. Bowman, Berlin; Report of Committee on Topographical Survey. In the evening at 8 o'clock the annual dinner will be held.

March 2.—Report of Committee on Drainage, with Question Drawer; "Drains of Field Tile," W. F. Van Buskirk, Stratford; "The Lake Wawanosh Drainage Scheme," John H. Jones, Sarnia; "The Payne River Drainage Scheme," T. H. Wiggins, Cornwall; unfinished business, new business, election of officers, etc.

A. J. Van Nostrand, Secy.

NEW PUBLICATIONS.

DARTMOUTH COLLEGE CATALOGUE, 1898-99.—Published by the College. Paper; 5¼ × 7¾ ins.

This is the 1899 edition of the annual Catalogue, containing a list of the officers and students and outlined courses of study. Particulars regarding the medical school and the College of Civil Engineering are included.

REGISTER OF THE LEHIGH UNIVERSITY, 1898-99.—Published by the University. Paper; 5 × 6¾ ins.; pp. 220.

This is the usual annual catalogue, giving lists of officers and students and the courses of study. The pamphlet concludes with a list of the Alumni of the University beginning with the class of 1869 and including those graduated in 1898.

REPORT OF THE COLLEGE OF MECHANICS AND ENGINEERING, UNIVERSITY OF WISCONSIN, 1897-98.—Pamph.; 6 × 9 ins.

This pamphlet is a report presented to the President of the University by a board consisting of the instructors of the College of Engineering, appointed to report upon the progress of engineering department of the State College. The increase in attendance is shown by curves and diagrams, which are very briefly described.

ELECTRIC RAILROAD LIST, Jan.-March., 1899.—The Railroad Gazette. New York city. Quarterly; paper; 4 × 6 ins.; pp. 252. $2.00 per year.

This is volume one number one of a quarterly publication in which the publishers intend presenting a complete list of the electric railways of the world. For completeness it also contains cable and horse railroads. The book is gotten up much the same as the well-known "Pocket List of Railroad Officials," and is intended to occupy the same field among street railway men that the "Pocket List" does among steam railway officials. It concludes with the full report of the Committee on Rules and Regulations of the American Street Ry. Association on Standard Rules and Regulations for the Government of Employees, and the Standard Classification of Accounts Adopted by the Street Ry. Accountants' Association of America.

THE JOURNAL OF THE IRON AND STEEL INSTITUTE.—Vol. LIV., No. II. London: E. & F. N. Spon. New York: Spon & Chamberlain. Secy., Bennett H. Brough, 28 Victoria St., London, S. W. Cloth; 6 × 8¾ ins.; pp. 624; 26 plates.

This volume of the Journal of the Iron and Steel Institute contains the minutes of proceedings and papers of the Stockholm meeting of the Institute, held Aug. 26, 1898. The following papers are included: "Outlines of the Development of the Swedish Iron Industry," R. Akerman; "On the Most Prominent and Characteristic Features of Swedish Iron Ore Mining," G. Nordenstrom; "On the Danger of Using Too Hard Steel Rails," C. P. Sandberg; "On the Iron Ore Deposits of Kiirunavaara and Luossavara," H. Lundbohm; "On Experiments Made with a Motor Using Blast Furnace Gas," A. Witz; "On Brittleness Produced in Soft Steel by Annealing," J. E. Stead; "On the Micro-Chemistry of Cementation," J. O. Arnold; "On the Action of Metalloids on Cast Iron," G. R. Johnson; "On the Action of the Projectile and of the Explosive on the Tubes of Steel Guns," W. C. Roberts-Austen; "On the Difference of Sulphides Through Steel," E. D. Campbell.

ANNUAL REPORTS OF THE PRESIDENT AND TREASURER OF HARVARD COLLEGE, 1897-98.—Published by the University. Paper; 6 × 9¼ ins.; pp. 409.

This is devoted to the annual statement of the President, Chas. E. Eliot, the reports of the various departments and a statement of the financial standing of the University. In his introduction President Eliot states that 384 alumni graduates, undergraduates or short term students served in the recent War. This number included 51 in the Army with the rank of captain or above and 25 in the Navy with the rank of ensign or above, this number including the Secretary and Assistant Secretary of the Navy. The total number of students at the beginning of the year was 1,819, which was a net gain over the preceding year of 65. In the Lawrence Scientific School 418 students of all kind were registered. The total number of books in the various libraries is given as 506,398, with 413,926 pamphlets. The Treasurer's report shows a total principal of $10,230,960, including investments of all sorts producing an income. The total income from this was $414,428. The total amount of gifts for current account for the year was $1,146,323, while other gifts for immediate use amounting to $90,662 were received.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins. and 9 x 12 ins.)

SURVEYING AND ENGINEERING INSTRUMENTS.—Herm. Pfister, 428 Plum St., Cincinnati, O. Paper; 6¼ × 9¼ ins.; pp. 16.

This is a catalogue and price list of transits, theodolites, Y-levels and a level designed specially for the use of architects and builders.

PACKING.—Boston Belting Co., Boston, Mass. Pamph.; 3½ × 6 ins.

This little pamphlet is really nothing more than an illustrated list of the various products of the Boston Belting Co. These include rubber ball valves, diaphragms, gaskets, packing rings and packing of all sorts.

CREOSOTED WOODEN BLOCK PAVEMENT.—Western Creosoting Co., Indianapolis, Ind. Paper; 4½ × 6½ ins.; pp. 28; 7 × 4¾ ins.; pp. 8.

These pamphlets describe the creosoted fine block paving as used in Indianapolis, Galveston and other cities where it is reported to be giving very satisfactory results.

GAS ENGINES.—The Dayton Globe Iron Works Co., Dayton, O. Paper; 6⅝ × 5¼ ins.; pp. 24.

This little pamphlet describes the "Dayton" gas engine, which is made in horizontal and vertical types, while one form is mounted on a special wagon frame for portable use. Particulars are given of plants operated by these engines.

PAINTS FOR IRON WORK.—Chicago Fireproof Covering Co., 50 Franklin St., Chicago, Ill. Paper; 5 × 6¾ ins.; pp. 8.

This pamphlet gives sketches and particulars of galvanized iron test plates which were painted with various paints and immersed in water for 48 and 106 days. The company's galvanic varnish shows up well.

POWER TRANSMISSION MACHINERY.—W. A. Jones Foundry & Machine Co., 59 South Jefferson St., Chicago, Ill. Paper; 5¼ × 7⅜ ins.; pp. 72.

This is a catalogue and price list of a varied assortment of equipment and supplies, including iron and wooden pulleys, shafting, couplings, clutches, belt-tighteners, tension carriages, conveyors, link belting, and general supplies.

FENCES AND GATES.—Jones National Fence Co., Columbus, O. Paper; 6 × 9 ins.; pp. 24.

This is a description of the Jones wire fence, which consists of longitudinal wires connected (after being strung) by vertical wires, secured to the main wires by crimping them and attaching clamps. The fence is made for railway, farm and garden use, and is used as a covering for a special fence gate having a pipe frame and posts.

ELECTRICAL MACHINERY.—The Bullock Electric Mfg. Co., Cincinnati, O. Paper; 9 × 6 ins.; pp. 62.

This handsome publication contains half-tone engravings and brief descriptions of the company's various types of dynamos, motors, etc., together with a number of engravings of the motors applied to printing presses, machine tools, etc. Some of the motors are of the reversible, variable-speed type.

APPLICATIONS OF ELECTRIC POWER.—The Bullock Electric Mfg. Co., Cincinnati, O. Three bulletins, 7¾ × 10 ins.; pp. 8 each.

One of these bulletins is devoted to slow-speed direct-connected motors for operating newspaper presses; another to generators directly connected to different makes of steam engines, and the third to multipolar generators and motors for direct-current lighting and power.

ASPHALT BLOCK PAVEMENT.—New Castle Asphalt Block Co., Pittsburg, Pa. Paper; 6¾ × 5 ins.; pp. 83.

This is a very neat and well-illustrated pamphlet, describing the manufacture of the paving blocks, illustrating streets paved with this material and giving tables of the amount of work done in various cities up to and during 1898. There are also a number of testimonials from city engineers and other municipal officers.

GAS ENGINES.—New Era Iron Works Co., Dayton, O. Paper; 8¾ × 6¾ ins.; pp. 32.

The "New Era" gas and gasoline engines are of the horizontal, single-cylinder, four-cycle type, and the largest are of 125 HP. The engines have center cranks, with two heavy overhanging flywheels. The pamphlet shows the construction of the engine, and its application to pumping and electric light plants. A number of testimonials are given.

POWDER AND SHOT.—The King Powder Co. and the Peters Cartridge Co., Cincinnati, O. Paper; 3⅞ × 6¾ ins.; pp. 48; 3⅜ × 6 ins.; pp. 6.

The larger of these two pamphlets describes the various explosives for sporting and blasting purposes, and also the Peters shot and cartridges. It contains also the rules of the National Rifle Association and the American Shooting Association, and the game laws of the United States. The smaller pamphlet is devoted to the Rex powder or dynamite.

250-VOLT ENGINE TYPE POWER GENERATOR.—Westinghouse Electric & Mfg. Co., Pittsburg, Pa. Pamph.; 7 × 10 ins.

This is number 62 of the series of Westinghouse standard circulars. It is published to call attention to a line of direct-current generators constructed particularly for supplying power to motors operating machine tools, cranes, elevators, ventilators, pumps and other machines

in factories, mills and mines. They are designed to operate 220-volt motors, thus allowing 30 volts drop on the lines. The special features of design are briefly mentioned and a table of standard sizes and dimensions is given.

ENGINES AND BOILERS.—Houston, Stanwood & Gamble, Cincinnati, O. Paper; 8⅝ × 6 ins.; pp. 32.

This firm manufactures single and double cylinder horizontal engines and tubular and loco-tubular boilers. The engines are all fitted with slide valves, and it is claimed the special construction permits the use of high mean-effective pressures, so that the engines will give as good economy as short-stroke, high-speed automatic single-valve engines. Compound engines are built for high pressures and variable loads.

WELL-DRILLING MACHINERY.—American Well Works, Aurora, Ill. Three pamphlets; paper; 6 × 9¼ ins.; pp. 48; 6 × 9¼ ins.; pp. 32; 3½ × 5⅞ ins.; pp. 32.

The two larger pamphlets contain descriptions and prices of the various machines, appliances and supplies used in well drilling and pumping. These include air compressors, deep-well pumps, continuous flow pumps, working barrels and heads, drilling rigs, etc. The smaller pamphlet contains mainly testimonials as to the use of the company's rigs, and prices of pipe and tubes.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng. News.
Feb. 23.	Heating, ventilating, etc., Advertised, Eng. News, Feb. 2 and 9.	Kansas City, Mo.	Feb. 9
Feb. 23.	Brick paving, etc.,	Fulton, N. Y.	Feb. 9
Feb. 23.	Park work,	New York, N. Y.	Feb. 16
Feb. 23.	Water-works,	Bemidji, Minn.	Feb. 16
Feb. 23.	Road roller,	New York	Feb. 16
Feb. 23.	Sprinkling wagon, etc.,	New York. N. Y.	Feb. 16
Feb. 23.	Culvert bridges (2),	Albany, N. Y.	Feb. 16
Feb. 23.	Street gravelling, etc.	St. Paul, Minn.	Feb. 23
Feb. 23.	Sewers, etc.,	Philadelphia, Pa.	Feb. 23
Feb. 23.	Completing drive,	Philadelphia, Pa.	Feb. 23
Feb. 24.	Water pipe,	Boston, Mass.	Feb. 23
Feb. 24.	Water department supplies,	St. Paul	Feb. 23
Feb. 24.	Brick paving,	Grand Rapids, Mich.	Feb. 23
Feb. 24.	Sewers,	Cleveland, O.	Feb. 16
Feb. 24.	Brick and stone paving,	Minneapolis, Minn.	Feb. 16
Feb. 24.	Bridge,	Hamilton, O.	Feb. 2
Feb. 24.	Brick paving, grading, etc.,	St. Louis, Mo.	Feb. 16
Feb. 25.	Court house,	Douglass, Ga.	Dec. 29
Feb. 25.	School building,	Cleveland, O.	Feb. 9
Feb. 25.	Removing garbage,	Allentown, Pa.	Feb. 16
Feb. 25.	Heating, plumbg, etc.,	E. Cambridge, Mass.	Feb. 16
Feb. 25.	College building,	Grinnell, Ia.	Feb. 16
Feb. 25.	Road work,	Fresno, Cal.	Feb. 23
Feb. 25.	Hospital building,	Washington, D. C.	Feb. 23
Feb. 25.	Pipe sewers,	Deshler, O.	Feb. 23
Feb. 25.	Water tower, etc.,	Whitehall, Ill.	Feb. 23
Feb. 26.	School buildings,	Honolulu, Hawaii	Feb. 23
Feb. 26.	Porcelain insulators,	Christiana, Norway	Jan. 19
Feb. 27.	Iron bridges (2),	Monticello, Mo.	Feb. 2
Feb. 27.	Brick paving,	Portsmouth, O.	Feb. 9
Feb. 27.	Masonic temple,	Wilmington, N. C.	Feb. 16
Feb. 27.	Gas lighting,	Vincennes, Ind.	Feb. 16
Feb. 27.	Electric lighting,	Vincennes, Ind.	Feb. 16
Feb. 27.	Water pipe, Advertised, Engineering News, Feb. 16.	Windsor, N. Y.	Feb. 16
Feb. 27.	School building,	New York, N. Y.	Feb. 16
Feb. 27.	Artesian well,	Jamestown, N. Dak.	Feb. 23
Feb. 27.	Paving, curbing, etc., Advertised, Engineering News, Feb. 23.	Peoria, Ill.	Feb. 23
Feb. 28.	Street grading,	Kansas City, Mo.	Feb. 23
Feb. 28.	Sewers,	Kansas City, Mo.	Feb. 23
Feb. 28.	School building,	Ponca, Neb.	Feb. 16
Feb. 28.	Gas plant,	Darlington, Okla. Ter.	Feb. 9
Feb. 28.	Pipe sewers, Advertised, Eng. News, Feb. 9 to 23.	Steelton, Pa.	Feb. 9
Feb. 28.	Bridge,	New Haven, Conn.	Feb. 23
Mar. 1.	Dust-cart designs,	London, England.	Jan. 5
Mar. 1.	Court house,	Arkadelphia, Ark.	Jan. 5
Mar. 1.	Railway and highway bridge, Advertised, Eng. News, Sept. 29 and Oct. 6.	Quebec, Que.	Jan. 12
Mar. 1.	Electric lighting,	Spartanburg, S. C.	Jan. 26
Mar. 1.	Water pumps, etc.,	Bilbao, Spain	Feb. 2
Mar. 1.	Paving bonds,	Bridgeport, O.	Feb. 2
Mar. 1.	Broken stone, etc., Advertised, Eng. News, Feb. 2 to 23.	Fort Hamilton, N. Y.	Feb. 2
Mar. 1.	Turbine,	Sault Ste. Marie, Mich.	Feb. 9
Mar. 1.	Sewers,	Mount Pleasant, Mich.	Feb. 9
Mar. 1.	Water-works, Advertised, Eng. News, Feb. 9 and 16.	Oto, Iowa.	Feb. 9
Mar. 1.	Water-works,	Mount Pleasant, Mich.	Feb. 9
Mar. 1.	Laying water pipe, Advertised, Eng. News, Feb. 9 to 23.	Amsterdam, N. Y.	Feb. 9
Mar. 1.	Road work (5 miles),	Batavia, O.	Feb. 9
Mar. 1.	Road bonds,	Scottsboro, Ala.	Feb. 16
Mar. 1.	Street grading, and paving,	Indianapolis.	Feb. 23
Mar. 1.	Macadamizing, etc.,	Clinton, Ia.	Feb. 23
Mar. 1.	Laying water pipe,	Chicago, Ill.	Feb. 23
Mar. 1.	Electric plant, Advertised, Engineering News, Feb. 23.	Baltimore, Md.	Feb. 23
Mar. 1.	Pipe wells,	Berlin, Ont.	Feb. 23
Mar. 1.	Water-works,	Stayner, Ont.	Feb. 23
Mar. 2.	School building,	New York, N. Y.	Feb. 23
Mar. 2.	Park work,	New York, N. Y.	Feb. 23
Mar. 2.	Boiler and repairs,	New York.	Feb. 23
Mar. 2.	Electric lighting,	Sea Isle City, N. J.	Feb. 23
Mar. 2.	Sewers,	Meriden, Conn.	Feb. 23
Mar. 3.	Sewers, etc.,	Keshena, Wis.	Feb. 16
Mar. 3.	Roads (10),	Bedford, Ind.	Feb. 9
Mar. 3.	Trunk sewer,	Cincinnati, O.	Feb. 9
Mar. 3.	Sewers,	Cleveland, O.	Feb. 9
Mar. 4.	Officers' quarters,	San Francisco, Cal.	Feb. 9
Mar. 4.	Quarrying stone, etc., Advertised, Engineering News, Feb. 9.	Washington, D. C.	Feb. 9
Mar. 4.	Brick paving, etc.,	Cleveland, O.	Feb. 9
Mar. 4.	Brick paving, Advertised, Engineering News, Feb. 2.	Washington, D. C.	Feb. 2
Mar. 4.	Bridge,	Villagrove, Ill.	Feb. 16
Mar. 6.	Sewers, Advertised, Eng. News, Feb. 2 and 9	Woonsocket, R. I.	Feb. 2
Mar. 6.	Iron flagstaffs (6),	St. Louis, Mo.	Feb. 9
Mar. 6.	Electric plant, Advertised, Eng. News, Feb. 9 to Mar. 2.	Fort Preble, Me.	Feb. 9
Mar. 6.	School building,	Eau Claire, Wis.	Feb. 9
Mar. 6.	Water-works,	Jamesburg, N. J.	Feb. 16
Mar. 6.	Court house,	Shepardsville, Ky.	Feb. 23
Mar. 6.	Electric lighting,	New Rochelle, N. Y.	Feb. 23
Mar. 6.	Gas and electric lighting,	New Rochelle	Feb. 23
Mar. 6.	Electric franchise, Advertised, Engineering News, Feb. 23.	Elizabethtown, Ky.	Feb. 23
Mar. 6.	Electric lighting,	Cambridge, O.	Feb. 23
Mar. 6.	School building,	New York, N. Y.	Feb. 23
Mar. 6.	Hospital building repairs,	New York, N. Y.	Feb. 23
Mar. 7.	Macadamizing, etc.,	Brooklyn, N. Y.	Feb. 23
Mar. 7.	Electric lighting, Advertised, Eng. News, Feb. 23 and Mar. 2.	Centralia, Ill.	Feb. 23
Mar. 7.	Sewers,	Niles, O.	Feb. 23
Mar. 7.	Orphans' home,	Northfield, Minn.	Feb. 23
Mar. 7.	Heating and ventilating, Advertised, Eng. News, Feb. 16 and 23.	Camden, N. J.	Feb. 16
Mar. 7.	Brick paving, etc.,	Cleveland, O.	Feb. 16
Mar. 7.	Water-works,	Allison, Ia.	Feb. 16
Mar. 7.	Street cleaning,	Cleveland, O.	Feb. 9
Mar. 7.	Water pipe, Advertised, Engineering News, Feb. 9.	Everett, Mass.	Feb. 9
Mar. 7.	Asphalt paving,	Joplin, Mo.	Feb. 9
Mar. 7.	Bridge,	Suisun City, Cal.	Feb. 23
Mar. 8.	Wharf, Advertised, Eng. News, Feb. 9 to Mar. 2.	Rock Point, Md.	Feb. 9
Mar. 8.	Water bonds,	McConnellsville, O.	Feb. 9
Mar. 8.	Electric plant, Advertised, Eng. News, Feb. 16 and 23.	Halifax, N. S.	Feb. 16
Mar. 8.	Underground crossing, Advertised, Engineering News, Feb. 23.	Williamsport, Pa.	Feb. 23
Mar. 9.	Sewers, Advertised, Eng. News, Feb. 16 to Mar. 2.	Norfolk, Va.	Feb. 16
Mar. 9.	Bridge,	Shreveport, La.	Feb. 9
Mar. 10.	Sewers,	Cleveland, O.	Feb. 16
Mar. 10.	Portland cement, Advertised, Eng. News, Feb. 16 to Mar. 9.	New York, N. Y.	Feb. 16
Mar. 10.	Cement, iron beams, etc., Advertised, Eng. News, Feb. 16 to Mar. 9.	Baltimore, Md.	Feb. 16
Mar. 10.	Ornamental iron work, Advertised, Eng. News, Feb. 16 and 23.	New York	Feb. 16
Mar. 10.	Bridge,	Cleveland, O.	Feb. 16
Mar. 10.	Heating and ventilating,	Cleveland, O.	Feb. 23
Mar. 10.	Railway,	Selma, N. C.	Feb. 23
Mar. 10.	Garbage disposal,	New York, N. Y.	Feb. 23
Mar. 11.	Portland cement, Advertised, Engineering News, Feb. 23.	Washington, D.C.	Feb. 23
Mar. 11.	Water pipe, Advertised, Engineering News, Feb. 23.	Washington, D.C.	Feb. 23
Mar. 11.	School building,	Wheaton, Minn.	Feb. 16
Mar. 11.	Reservoir, Advertised, Engineering News, Feb. 9.	Washington, D. C.	Feb. 9
Mar. 11.	Road work, Advertised, Eng. News, Feb. 9 and 16.	Woodbury, N. J.	Feb. 9
Mar. 12.	Electric light plant,	Manilus, N. Y.	Jan. 12
Mar. 13.	Brick paving and curbing,	Kokomo, Ind.	Feb. 23
Mar. 14.	Bridge (steel truss),	Macon, Ga.	Feb. 23
Mar. 14.	Drainage ditch,	Ponca, Neb.	Feb. 9
Mar. 14.	Wooden bridges,	Loup, Neb.	Feb. 9
Mar. 14.	Plumbing, Advertised, Eng. News, Feb. 16 to Mar. 9.	Fort Hamilton N. Y.	Feb. 16
Mar. 14.	Paving, etc.,	Cleveland, O.	Feb. 16
Mar. 15.	Light-house, Advertised, Eng. News, Feb. 16 and 23.	Baltimore, Md.	Feb. 16
Mar. 15.	Metal work, Advertised, Eng. News, Feb. 16 and 23.	Baltimore, Md.	Feb. 16
Mar. 15.	Exhibition buildings,	Glasgow, Scotland	Feb. 16
Mar. 15.	Main sewer, Advertised, Eng. News, Feb. 16 and 23.	Cleveland, O.	Feb. 16
Mar. 15.	Water-works, Advertised, Eng. News, Feb. 9 and 16.	Fayetteville, Tenn.	Feb. 9
Mar. 15.	Barracks, etc.,	San Francisco, Cal.	Feb. 9
Mar. 15.	Purchase of water-works,	Belem, Brazil	Dec. 1
Mar. 15.	Electric r'y (23 miles), Advertised, Eng. News, Nov. 17 to Dec. 8.	Shanghai, China	Nov. 24
Mar. 15.	Bridges (3), Advertised, Engineering News, Jan. 19.	Joliet, Ill.	Jan. 19
Mar. 15.	Court house plans,	Wilkesbarre, Pa.	Jan. 26
Mar. 15.	Riprap rock, Advertised, Eng. News, Feb. 23 to Mar. 9.	Rock Island, Ill.	Feb. 23
Mar. 18.	Pile protection,	Cincinnati, O.	Feb. 23
Mar. 20.	Building,	Iowa City, Ia.	Feb. 23
Mar. 20.	Repairing pump,	Cleveland, O.	Feb. 23
Mar. 21.	Pumping engines (3),	St. Louis, Mo.	Feb. 23
Mar. 27.	Court house,	Leesville, La.	Jan. 26
Mar. 31.	Telephone concessions, Advertised, Eng. News, Nov. 17 to Dec. 8.	Shanghai, China	Nov. 24
Apr. 1.	Viaduct substructure,	St. Joseph, Mo.	Jan. 5
Apr. 1.	Opera house,	Columbus, Ga.	Jan. 19
Apr. 3.	Pumps (2),	Winnipeg, Man.	Feb. 9
Apr. 6.	Dredging boat,	Sabine Pass, Tex.	Feb. 9
Apr. 10.	Bridges (2), Advertised, Engineering News, Feb. 23.	Chicago, Ill.	Feb. 23
Apr. 10.	Water bonds,	Lakeport, Cal.	Feb. 23
Apr. 11.	Water-works,	Lakeport, Cal.	Feb. 23
Apr. 14.	Hall building,	Bradford, England.	Jan. 19
Apr. 15.	Sewer material, etc., Advertised, Eng. News, Feb. 23 and Mar. 2.	Honolulu, H. I.	Feb. 23
June 1.	Plans for market,	Leeds, England	Feb. 16
No date.	Cement plant,	Baltimore, Md.	Feb. 16
"	Railroad (40 miles), Advertised, Engineering News, Feb. 2.	Ft. Dodge, Ia.	Feb. 2
"	Railway (100 miles),	St. Louis, Mo.	Feb. 16

RAILWAYS.

ARKANSAS.—A bill has been introduced into Congress enacting that the time for the completion of the incline railway upon West Mountain reservation, Hot Springs, Ark., be extended for three years. The right of way has been cleared and the road practically graded up the side of the mountain.

ARKANSAS & NORTHWESTERN.—Contracts will be let in March, according to reports, for the grading for this proposed railway from Hope to Stamps, Ark., 24 miles. Surveys have been made, and the maximum grade will be 1%. A 45-lb. rail will be laid. W. Y. Foster, Pres., Hope; Gus Knoble, Ch. Engr., Stamps, Ark.

BOYER VALLEY.—M. Vincent, Onawa, Ia., has been awarded the contract for 31 miles of grading for this new line between Mondamin and Ute, Ia. The grade will be heavy most of the way, with several deep cuts. At Mondamin the grade will be 6 to 8 ft. wide and 1 mile long, to accommodate 11 switch tracks each 1 mile in length. Mondamin will be used as a reserve switch yard, in case of a grain blockade, such as the Northwestern experienced in 1898. This company was incorporated Oct. 5 by officers of the Chicago & Northwestern Ry. Co., 22 5th Ave., Chicago.

BUCKEYE COAL & RAILROAD.—This company was incorporated in Ohio, Feb. 15, with a capital stock of $250,000, to construct railways to its mines, etc. The incorporators are: James H. Hoyt and Gustav Von Dersteiner, of Cleveland, O., S. D. Paine and Gilbert D. Preston, of Columbus, O., and Ben H. Akin.

BUFFALO & SUSQUEHANNA.—H. Herden, Ch. Engr., Galeton, Pa., informs us that he is not aware of any projected extension of this line from Wellsville, N. Y., on, as currently reported.

CAROLINA & NORTHERN.—The Atlantic Seaboard Co., Bourse Bldg., Philadelphia, Pa., will soon begin the construction of this line from Goldsboro, N. C., via Lumberton to a point in South Carolina, about 45 miles, according to reports. The company was incorporated, Jan. 10, with a capital stock of $500,000.

CASTINE & EASTERN.—The legislature of Maine has been petitioned for a charter for this company, which proposes to build a standard-gage railway from Brooksville, opposite Castine, to Hancock, via Penobscot, Sedgwick, Bluehill, Surry and Ellsworth, Me., motive power to be either steam, electricity or compressed air. J. N. Greene, E. E. Chase and others.

CINCINNATI NORTHERN.—W. D. Williams, Ch. Engr., Van Wert, O., informs us that the proposition to extend this line from Franklin into Cincinnati, O., is only rumor. At present the company enters Cincinnati over the Cincinnati, Lebanon & Northern Ry.

COPPER RANGE.—Wm. A. Paine, Pres., 27 State St., Boston, Mass., informs us that cash has been paid in for the completion of this line from Calumet to Greenland, Mich., on the Chicago, Milwaukee & St. Paul Ry. A further extension to Watersmeet, on the Chicago & Northwestern Ry. is also projected, making a total length of 70 miles. Thomas Appleton, Engr., Houghton, Mich.

FORT SMITH & WESTERN.—An act has been passed by the House of Representatives authorizing this company to construct and operate a railway through the Choctaw and Creek Nations, Indian Territory. The directors are: John Vaile, Fort Smith, Ark.; George Hayden, Ishpeming, Mich., and others.

GREAT EASTERN.—J. H. Macleary, Gen. Mgr., Suffolk, Va., informs us that bids will be received for the construction of this new railway by March 10. The route is from Selma to Douglas Bay, on Palmaco Sound, via Snowhill, Washington and Pantego, N. C., 142 miles. The surveys were completed, but some changes are now being made, as it was first expected to go to Goldsboro. About 50 miles of right of way have been obtained, and money has been secured. A large force of men is now making about 1,000 ties a day. J. W. Lynch, Pres., Kinston, N. C.; J. C. Turner, Ch. Engr., Snowhill, N. C.

GULF & SHIP ISLAND.—S. S. Bullis, Gen. Mgr., Gulfport, Miss., informs us that 30 miles of road has practicably been located, and that the company will build. The proposed route is from Hattiesburg, Miss., north 40 miles. J. T. Jones, Pres., Buffalo, N. Y.; J. B. Hatch, Ch. Engr., Hattiesburg.

KNOX CREEK RY. & LUMBER.—Reports state that this company has been organized with $150,000 capital stock, to operate lumber mills at Welch, W. Va., with a capacity of 100,000 ft. a day. Among those interested are: W. C. Ivey, C. J. Johnson, E. R. Monroe and Chas. E. Heald, all of Lynchburg, Va.

MARSHALL, TIMPSON & SABINE PASS.—T. S. Garrison, Pres., Timpson, Tex., informs us that work is progressing on the first 20 miles of this line to Carthage, Tex. The projected length is 100 miles, from Marshall to Timpson, via Carthage and Gary. The company has the contract. Charles Hanks, Ch. Engr., Timpson.

MISSOURI MIDLAND.—Construction work is expected to begin in March on this new line from Columbia to Huntsville, Mo., nine miles. Surveys have been made. Several bridges will be needed, and 60-lb. rails will be laid. Charles Wiggins, Pres., 404 Bank of Commerce Bldg., Robert Moore, Ch. Engr., Laclede Bldg., both of St. Louis.

MONROE.—Reports state that the Monroe Construction Co. will begin the construction of this line, next month, which is projected to run from Fort Smith, Ark., to New Orleans, La., and from Memphis, Tenn., to Galveston, Tex. The section between Monroe and Natchitoches, La., 90 miles, will be built first. A. L. Atkins, Gen. Mgr., Arcadia, La.; Ira W. Sylvester, Ch. Engr., Alexandria, La.

MUSKOGEE, OKLAHOMA & WESTERN.—An act has passed the House of Representatives authorizing this company to construct and operate a railway through Oklahoma and the Indian Territory. J. T. Nelson, Secy. Indian Territory Consolidated Coal Co., Fort Scott, Kan., can probably give particulars.

NORFOLK & WESTERN.—L. H. Vaughan & Co., Roanoke, Va., inform us that they have the contract for double-tracking this line between Christiansburg, Va., and Big Tunnel, and expect to have work completed by Dec. 1. C. S. Churchill, Ch. Engr., Roanoke.

NORTHWEST.—Orman & Crook, Pueblo, Colo., are reported to have been awarded the contract for the construction of a portion of this proposed line from Nggle to Oxbrow, in the Seven Devils' mining district, via Conner Creek, Flickbar, Powder and Pine, Ore., a distance of 73 miles. The work is estimated to cost about $1,000,000, and will require about 2,500 ft. of tunnelling through lime rock. Isaac E. Blake, Pres., 11 Broadway, New York; Carlos Gillespie, Ch. Engr., Huntington, Ore.

PAN-AMERICAN.—The commission appointed by the Pan-American Congress in 1889 has just published its report on the feasibility of establishing a trunk line of railway between the American republics. A number of surveys were made. It was determined that the total distance between New York and Buenos Ayres would be 10,221 miles, of which 4,769 miles in operation could be utilized, leaving 5,462 miles to be constructed, which it is estimated would cost $175,000,000, or about an average of $32,000 a mile. A. J. Cassatt, Chn., 26 South 15th St., Philadelphia, Pa.

PENNSYLVANIA.—Reports from Columbia, Pa., state that this company intends to straighten its road and lay another track between Rheem's station and Conewago, Pa. J. Frank Keller has been awarded the contract for two miles of the work, which is quite heavy and includes an 80-ft. cut. The stone work, such as culverts, bridges, etc., on this section will be done by Chas. A. Simmons & Co. B. B. Gonder, Strasburg, Pa., has also received the contract for about 5,000 ft. of work near Conewago, requiring 50,000 cu. yds. of rock and earth excavation, bridges, etc.

QUEEN ANNE'S.—Wade, Burns & Co., Baltimore, Md., inform us that they have not yet begun work on the extension of this railway from Lewes to Rehoboth, Del., about 10 miles. It has not been decided when construction will be started, but the company desires to have the line completed in time for summer travel.

ST. LOUIS & OKLAHOMA CITY.—This new line between Sapulpa, Ind. Ter., and Oklahoma City, Okla., 108.23 miles, is reported to have been bought by the St. Louis & San Francisco R. R. Co., D. B. Robinson, Pres., St. Louis, Mo.

SIOUX CITY & OMAHA.—The Senate has passed an act authorizing this company to construct a railway through the Omaha and Winnebago Reservation, Thurston county, Neb., beginning at Decatur.

SOUTHERN ALABAMA.—R. M. Quigley & Co., St. Louis, Mo., inform us that competitive bids were not received for the 45 miles of work which they let between Pine Apple and Repton, Ala., but that certain contractors were selected and made private contracts with for the work. The following is a list of contractors to which the work was awarded, and the section numbers embraced in their contracts: W. B. Hard & Son, Centerville, Ala., sections 1 to 4, inclusive; O. A. Gibson & Co., West Point, Miss., sections 5 to 8; Thomas Ruffin, Atlanta, Ga., section 9; J. H. Cary, Memphis, Tenn., sections 10 to 18 and

22 and 23; Thomas McFarland & Co., Knoxville, Tenn., sections 25 to 30; Val. Driscoll, Kempsville, Ala., sections 19 and 20; B. A. Carter, Repton, Ala., sections 21, 31 and 32; J. M. Willis, Monroeville, Ala., section 33; Patrick Foley, Repton, Ala., section 34; D. P. Martin, Monroeville, Ala., section 35; Geo. W. Callahan & Co., Knoxville, Tenn., sections 36 to 45, inclusive; Moore & Andrews, Jasper, Ala., all timber work and bridges. Section 24 and the 850-ft. tunnel, on section 25, will be done with the company's own forces.

WASHINGTON & SEABOARD.—This company has been incorporated with a capital stock of $1,250,000, according to reports, to build a line from Hyattsville, Md., to Point Lookout, at the mouth of the Potomac River. A. B. Linderman, Pres., of Bethlehem Iron Works, Bethlehem, Pa., and Charles Merriken, Baltimore, Md., are said to be interested.

WEST VIRGINIA.—Wm. J. Nicolls, Pres. and Ch. Engr., 209 Betz Bldg., Philadelphia, Pa., informs us that the proposed West Virginia R. R. will be 20 miles in length, and is intended to develop the lands of the Preston Coal & Coke Co., which is practically owned by the same individuals. A connection will be made with the Bellington branch of the Baltimore & Ohio R. R. at Cecil, about 4 miles from Grafton, W. Va. From Cecil the road will go northeast through Barber county, passing the border of Preston county through the lands of the Preston Coal & Coke Co., and connecting at its eastern end with Baltimore & Ohio main line at Rowlesburg. Surveys have been completed and construction is to begin without delay.

WRIGHTSVILLE & TENNILLE.—G. W. Perkins, Pres., Tennille, Ga., informs us that this company does not expect to build an extension, as currently reported.

STREET AND ELECTRIC RAILWAYS.

MEREDITH, N. H.—The proposed Meredith & Ossipee Electric Ry., now before the state legislature, is designed to connect the White Mountains and Northern divisions of the Boston & Maine R. R., passing through Center Harbor, Sandwich, Moultonboro and Tuftonboro, a distance of about 20 miles.

BILLERICA, MASS.—Walter A. Drucker, owner of the electric light plant of Billerica, informs us that an electric railway will be built this summer from Billerica to Arlington Heights, via Bedford.

PLYMOUTH, MASS.—The Brockton St. Ry. Co. is said to have bought the Plymouth & Kingston St. Ry. and its entire equipment, to be operated as a part of the projected electric railway from Plymouth to Brockton.

WINTHROP, MASS.—The selectmen have granted a franchise to the Winthrop & Boston Electric St. Ry. Co.

WOBURN, MASS.—It is reported that the Reading & Lowell St. Ry. Co. proposes to build a new line between North Woburn and Wilmington, so as to give a continuous route from Lowell to Boston.

NEW BRITAIN, CONN.—The Central Ry. & Electric Co. is reported to have decided to extend its lines to Southington, parallel to the Northampton division of the New York, New Haven & Hartford R. R. E. H. Mather, Secy.

AUBURN, N. Y.—The Auburn Inter-Urban Electric Ry. Co. has filed a notice of extension of its lines from Skaneateles to the west line of Syracuse, a total length of 16 2-3 miles. George B. Leonard, Pres., Syracuse, N. Y.

LITTLE FALLS, N. Y.—W. F. Lansing, Gen. Mgr., Little Falls, informs us that the right of way has been obtained and that everything is nearly ready to begin the construction of the proposed Little Falls & Herkimer St. Ry., from Little Falls to Utica, via Herkimer and Frankfort, 22 miles. Beckwith & Quackenbush will build the line. John V. Quackenbush, Pres., Mohawk, N. Y.; Stephen E. Babcock, Ch. Engr., Little Falls.

NIAGARA FALLS, N. Y.—Joseph R. Megrue, of New York, is stated to have been appointed temporary receiver of the Niagara Falls & Lewiston R. R. Co. J. K. Brooks, Supt., Coal & Iron Exchange, Buffalo, N. Y.

ROCHESTER, N. Y.—The Rochester Ry. Co. has been granted a franchise to double track its road in North Clinton St. and to extend the line. T. J. Nicholl, Mgr.

EASTON, PA.—The State Belt Electric St. Ry. Co. was incorporated in Pennsylvania Feb. 14, with $36,000 capital stock, to construct an electric street railway. The incorporators are: Thomas A. H. Hay, Pres.; Wm. O. Hay, E. J. Fox and N. D. Chase, all of Easton; Chas. A. Richardson, Worcester, Mass.

ERIE, PA.—Reports state that contracts will soon be let for the construction of the proposed electric line from Erie to Edinboro and thence to Cambridge Springs. John Doll, of Erie, is interested.

PITTSBURG, PA.—Construction work is expected to begin soon on the extension of the Monongahela St. Ry., from Wilkinsburg to East Pittsburg, seven miles, known as the Wilkinsburg and East Pittsburg R. R. Wilkins & Davison, Engrs., Pittsburg.

CUMBERLAND, MD.—John W. Burchinal, Vice-Pres. of Cumberland & Westernport Electric Ry., Moundsville, W. Va., informs us that the surveys are about completed, the right of way obtained and capital secured for this proposed line from Cumberland, via Frostburg and Lonaconing, 30 miles. Isaac F. Walker & Son, Stephen Girard Bldg., Philadelphia, Pa., have the contract. E. F. Walker, Pres.; G. D. Howell, Ch. Engr., both of Stephen

FREDERICK, MD.—We are in receipt of the prospectus of the Frederick, Thurmont & Northern Ry. Co., incorporated in 1898 with a capital stock of $150,000, which proposes to construct a steam or electric railway from Frederick City, via Lewistown, Thurmont and Emmitsburg to the state line, in the direction of Gettysburg, Pa., to which place it is expected to extend the line. L. Victor Baughman, Pres. Nothing definite has yet been done towards building the line, excepting organization. Girard Bldg., Philadelphia.

PETERSBURG, VA.—It is announced that the street railway system in this city, owned by the Piedmont Traction Co. and the Virginia Electric Co., has been purchased by John L. Williams & Sons, Richmond, Va., and Middendorf, Oliver & Co., Baltimore, Md., and that the property will be greatly improved and a new power house erected.

LEXINGTON, KY.—The Passenger & Belt Ry. Co., the Belt Electric Line Co., the Central Electric Co. and the Hercules Iron Co. have been consolidated under the name of the Lexington Ry. Co., with $800,000 capital stock. The incorporators are: John T. Shelby, John R. Allen, R. P. Stall, C. H. Stall, J. C. Rogers, W. J. Loughridge and C. J. Bronston.

DAYTON, O.—The Craighead Engineering Co., Cincinnati, O., confirms the report in our last issue to the effect that it had received the contract for the construction of the Dayton & Xenia Traction Co.'s line between Dayton and Xenia, 29 miles. The Craighead Flexible Bracket system will be used.

ADRIAN, MICH.—The council has granted a franchise to the Jackson & Adrian Electric Ry. Co.

DETROIT, MICH.—The Detroit & Pontiac Ry. Co. has increased its capital stock from $400,000 to $500,000. The line now consists of a single track and switches, 18 miles in length, from Highland Park to Pontiac. In order to give better service it is necessary to have a double track over the entire route, and the increase of capital stock is for that purpose. Rights of way have already been secured and construction is expected to begin as soon as the weather permits. George Hendrie, Pres., Hammond Bldg., Detroit.

SAN DIEGO, CAL.—Reports state that the San Diego, Pacific Beach & La Jolla Ry. has been sold to the Spreckel Bros., of San Francisco, who will convert the entire line into an electric railway. An 8-mile extension from Old-town to Roseville is said to be projected. L. J. Davids, Ch. Engr., San Diego.

LOGAN, UTAH.—Christian Garff, Engr., of Logan, informs us that the construction of a street car line in this city, and also of an electric light plant, is under consideration.

ST. CATHARINES, ONT.—Addison B. Colvin, Pres. of Glens Falls Trust Co., Glens Falls, N. Y., informs us that the St. Catharines and Niagara Falls R. R. has been bought by Joseph A. Powers, Lansingburgh, N. Y., John W. Herbert, Helmetta, N. J., and himself, and that the road will be extended to Dalhousie, where connection will be made with a new line of boats for Toronto. Another extension will be to Niagara Falls, Canada side, where it is expected to cross the upper bridge, and through arrangement with Buffalo & Niagara Falls R. R., run into Buffalo, N. Y. This bids fair to be a very popular pleasure line. In addition, a freight relation will be made with the Michigan Central, Wabash and other companies, which will make it an important freight line. F. A. Cheney, St. Catharines, can give full information as to mechanical arrangements.

ELECTRIC LIGHT AND POWER.

RUMFORD FALLS, ME.—The Rumford Falls Light & Water Co., it is stated, will put in two machines of 2,400 lights each. A new water-wheel will also be put in.

ALTON, N. H.—The Alton Electric Light & Power Co., it is stated, proposes to put in a steam power plant.

BILLERICA, MASS.—Walter A. Drucker, Billerica Centre, Mass., writes us that he has been granted a franchise to furnish light and power for this place and the Centre. Arrangements for the plant will be made early in the spring. About 2,000 lights will be required, and Mr. Drucker would like to hear from manufacturers of supplies. The plant will be operated by steam. Population of both places, 3,000.

TAUNTON, MASS.—The council is considering the question of putting in new machinery at the plant.

NEWARK, N. Y.—We are informed that bids will soon be opened for building a plant for the Newark Light, Heat & Power Co.; estimated cost, $35,000. Address A. L. Foote, D. P. Smith and Frank Garlock.

NEW ROCHELLE, N. Y.—Bids are asked by the village board of trustees until March 6 for lighting the streets with electricity or gas for one year.

RENSSELAER, N. Y.—G. W. Wilkins, Kinderhook, N. Y., has been awarded the contract for building a power house in this place for the C. & R. Ry. & Lighting Co.

SEA ISLE CITY, N. J.—Bids are asked until March 2 for lighting the borough with either arc, incandescent, Welsbach or acetylene. A. H. Sickler, Mayor, 516 Minor St., Philadelphia; Jas. J. Chapman, Clk.

STOCKTON, N. J.—The Camden Lighting & Heating Co., Camden, N. J., is reported to have been awarded a five-year contract for lighting this town.

WEEHAWKEN, N. J.—The North River Heat, Light & Power Co., Hoboken, N. J., recently incorporated, has applied to Union Hill for a franchise. It is proposed to have wires both on poles and underground. A. K. Bonta, Hoboken, may be addressed.

SOUTH BETHLEHEM, PA.—Bids were asked until Feb. 20 for lighting the streets with electricity for five years from June 20. C. G. Boyer, Chn. Lamp Com.

WILKES-BARRE, PA.—The question of building a municipal plant is being considered. Jno. H. Dando has been securing information.

DOVER, DEL.—E. Cooper, Clk. Council, writes us that the council will have entire charge of the construction of the new plant, to cost $10,000. It will be operated by steam. It will have 40 2,000-c. p. arc lights; the number of incandescent lights not being decided upon. E. L. Clarke, Chn. Com.

WILMINGTON, DEL.—The question of this city building a plant is being considered.

WASHINGTON, D. C.—The following bids were received last week by the Treasury Department for putting in electric motors for the post office: Thresher Electric Co., Dayton, O., $3,600; John H. Finney, Washington, $4,115; Crocker-Wheeler Electric Co., New York, $4,700; General Electric Co., Schenectady, N. Y., $4,980; C. & C. Electric Co., New York, $4,042.

BALTIMORE, MD.—Bids are asked until March 1 for furnishing and installing a plant for the Mount Royal pumping station, as stated in our advertising columns. Wm. L. Kenly, Ch. Engr. Water Bd.; Jas. E. Hewes, Elec. Engr.

LONACONING, MD.—We are informed that bids will be wanted in about 30 days for constructing a plant for the Home Electric Co., now being organized. The plant will have 50 2,000-c. p. arc and 1,000 16-c. p. incandescent lights; estimated cost, $7,000.

WILLIAMSPORT, MD.—M. Emmett Cullen, Town Treas., writes us that after the election of town officers on March 6 matters in regard to the erection of a plant will probably assume a more definite shape.

NEW LONDON, N. C.—We are informed that the North Carolina Power Co. proposes to develop 25,000 HP. and transmit it to the neighboring cities within a radius of 50 miles for operating cotton mills. The plant will be built on the Yadkin River at Rockwell, N. C. E. B. C. Hambley, Pres.

TARBORO, N. C.—J. A. Weddell, Clk. and Treas., writes us that a bill is before the legislature authorizing this place to vote on the question of issuing $50,000 in bonds for a plant, water-works and a sewerage system, the plant to cost $10,000.

COLUMBUS, GA.—The committee has reported in favor of granting a franchise to the Columbus Power Co. G. Gunley Jordan may be addressed.

SHEFFIELD, ALA.—Press reports state that a bill, just passed by Congress, authorizing Muscle Shoals Power Co. to build and operate a canal at Sheffield is for a project, financial backers of which are New York capitalists. It is the purpose of the promoters to construct a power canal on the side of the Tennessee River, opposite the Government canal. From this canal it is proposed to generate power for furnishing electric lighting for Sheffield and other surrounding Alabama towns, and also power for manufacturers. The estimated cost is about $1,000,000.

ELIZABETHTOWN, KY.—Bids are asked until March 6 for the purchase of a 20-year franchise to construct and operate a plant, as stated in our advertising columns. R. L. Wintersmith, Mayor.

BEREA, O.—E. S. Loomis, Clk., writes us that the council will begin to act in the matter of putting in a plant in March.

CAMBRIDGE, O.—Bids are asked until March 6 for furnishing 75 arc lights for the streets for five years, according to reports. T. R. Deselm, Cy. Clk.

PORTSMOUTH, O.—The water-works trustees are reported as considering the question of purchasing a dynamo.

TORONTO, O.—The Toronto Electric & Power Co. has awarded the contract for a new dynamo to the Peerless Engineering Co., Cleveland, O., and that for 18 2,000 c. p. enclosed arc lights to the Adams-Bagnall Electric Co., Cleveland.

ALBANY, IND.—Plans and specifications for a plant and new water-works have been prepared.

SEYMOUR, IND.—The Wayne Engineering & Construction Co., Fort Wayne, Ind., has submitted a proposition for a plant for this place.

SOUTH BEND, IND.—The South Bend Electric Light Co., it is stated, will make a number of improvements to its plant.

BELDING, MICH.—The council has granted a 30-year franchise to the Citizens' Electric Lighting Co., and has awarded it a 5-year contract for lighting the city. F. R. Chase, Smyrna, Mich., and M. A. Reed, Belding, are interested.

QUINCY, MICH.—We are informed that the city will ask for bids in March to construct a plant to cost about $6,000. The specifications are not quite ready. The plant will have a capacity for 50 1,200-c. p. arc and 1,500 16-c. p. incandescent lights. There will be two engines, two 75-K-W. alternators, five miles of overhead wire. The boilers are already in, as it is proposed to have the plant operated in connection with the water-works. Chas. F. Crouch, Ch. Engr.

CENTRALIA, ILL.—Bids are asked until March 7 for furnishing 53 or more arc lights for five years, as stated in our advertising columns. M. E. Drum, Chn. Com.

OCONTO, WIS.—W. A. Holt has offered to form a company to put in a plant.

WEST SUPERIOR, WIS.—The St. Louis River Water Power Co. is making contracts for furnishing its power from the proposed plant, according to reports. Jay Cooke, of Philadelphia, is interested.

MINNEAPOLIS, MINN.—Local papers state that work will soon be begun on the proposed power plant on Coon Creek, which will develop 10,000 HP. Thos. Lowry, Temple Court, Minneapolis, is interested.

MINNEAPOLIS, MINN.—The committee is reported by the local papers to have decided to ask for new bids for public lighting. The bids received Jan. 21 were given in our issue of last week.

PINE CITY, MINN.—F. McCormick, of Duluth, Minn., who was recently awarded a contract for lighting this place, will begin the construction of the plant in the early spring.

JOPLIN, MO.—T. W. Cunningham, Mayor, writes us that an election will be held Feb. 28 to vote on the question of issuing bonds for a plant.

WILLS POINT, TEX.—A franchise for a plant, water-works, etc., is reported to have been granted by the council to Chicago parties.

DENVER, COLO.—A syndicate composed of Moore & Schley and Emerson, McMillin & Co., of New York, H. B. Hollis & Co., Wood & Havemeyer and John C. Tomlinson, of New York, are reported as having secured control and will consolidate the Denver Consolidated Gas and the Denver Consolidated Electric Light companies of this city. The new company will issue $3,000,000 of stock, and $5,500,000 bonds to run 50 years and bear 5% interest.

MARTINEZ, CAL.—J. H. Denniger and Wm. Johnson have been granted a 20-year franchise in Crockett and Valona, according to reports.

NAPA, CAL.—The Clear Lake Electric Power Co. has asked for a franchise for a plant.

SUISUN, CAL.—E. J. Hamilton, Healdsburg, Cal., has submitted a proposition to light this town.

VISALIA, CAL.—C. S. Young and W. A. Burkholder, of San Francisco, have been awarded the contract for constructing a transmission line about 62 miles long from Mount Whitney. The plant complete will cost $200,000. Robt. Doble, Consult. Engr., San Francisco.

OTTAWA, ONT.—The Metropolitan Electric Co. received bids Feb. 20 for constructing its plant. As stated in our issue of Jan. 26, the plant will cost about $280,000. Thos. Lindsey may be addressed.

NEW COMPANIES.—Grand Rapids Water Power & Boom Co., Grand Rapids, Minn.; $50,000; to construct a dam, canal and power plant on the Mississippi River at Grand Rapids; D. M. Gunn, H. D. Powers, Daniel W. Doran, L. F. Knox, John Costello, George F. Meyers, John Beckfelt.

Washington Lighting Co., Akron, O.; $40,000, with $50 paid in; A. Green, E. I. James, H. L. Snyder, E. J. Creffield, W. Phillipson.

East Jersey Electric Co., Trenton, N. J.; $1,000,000; to manufacture and deal in electricity, light, heat and power, including compressed air; Charles F. Johnson, New York; S. Hand Taylor, Philadelphia; Joseph P. Cooper, Rutherford, N. J.

Sturgeon Falls Electric Light & Power Co., Ltd., Sturgeon Falls, Ont.; $20,000; Ernest A. Bremner, London, England; Wm. G. Finley, Sturgeon Falls; Harold Patriarche, Elec. Engr., Toronto.

Middleport Power Co., Middleport, N. Y.; $15,000; to manufacture electric light, heat and power; Frank G. Lott, Thomas J. Wilcox, Niagara Falls, N. Y.; William J. Sterrett, George F. Thompson, Middleport; Byron C. Stanton, Sanborn, N. Y.

BRIDGES.

NORTHAMPTON, MASS.—It is reported that the Northampton & Amherst St. Ry. Co. has applied to the legislature for permission to construct a new bridge over the Connecticut River between Northampton and Hadley. The board of aldermen is considering the question of repairing the present bridge over the river, according to reports. E. I. Chapp, Cy. Clk.

NEW HAVEN, CONN.—Bids are asked until Feb. 28 for the sub and superstructure of a new bridge over West River on Derby Ave. C. W. Kelly, Cy. Engr.

BALLSTON SPA, N. Y.—The question of raising $1,500 for constructing an iron bridge over the outlet of Ballston Lake and repairing the highway will soon be voted upon.

BINGHAMTON, N. Y.—W. P. Kennedy, E. H. Titchener and E. R. Mason have been appointed a committee by the board of trade to urge the city officials to act at once in order to secure state aid and the favorable action of the state railroad commissioners for the proposed viaduct over the railway at Chenango St.

BROOKLYN, N. Y.—The department of bridges has awarded a contract for constructing the Blissville bridge over Newtown Creek to the Degnon-McLean Construction Co., 1 Broadway, New York, at $56,014, including repairs and westerly abutment, and at $57,414 for reconstruction. The two next lowest bidders were Gildersleeve & Rolf, 39 Cortland St., New Yorw, $60,851 and $61,851, and Frank Pidgeon, 351 Madison Ave., New York, $72,666 and $73,611.

BROOKLYN, N. Y.—The Bush Co., Ltd., 27 Williams St., New York, is receiving estimates for a floating bridge at the end of its pier, foot of 42d St., Brooklyn, and also for coal pockets, conveyors and trestle work.

CARLTON, N. Y.—This place is considering the question of issuing $12,000 of bridge bonds, according to reports.

HARVARD, N. Y.—The question of appropriating $6,000 for a bridge over the river at this place will be voted upon at the town meeting, at Hancock.

NEW YORK, N. Y.—The following bids were received Feb. 18 by the new East River bridge commissioners, 49 Chambers St., for constructing the four steel towers and two end spans of the new East River bridge, as advertised in Engineering News:

Pennsylvania Steel Co., Steelton (accepted)	$1,209,444
New Jersey Steel & Iron Co., Trenton, N. J.	1,220,230
Benj. Maurice & Co., Athens, Pa.	1,230,000
Phoenix Bridge Co., Phoenixville, Pa.	1,315,000
Elmira Bridge Co., Ltd., Elmira, N. Y.	1,374,000
King Bridge Co., Cleveland, O.	1,416,000

TROY, N. Y.—Senator Douglass has introduced a bill authorizing the Albany Ry. Co. to construct a bridge over the Hudson River between Troy and Watervliet.

WATERVLIET, N. Y.—Assemblyman Sage has presented a bill appropriating $7,500 for a steel bridge over the Erie Canal at 23d St.

WEST HAMPTON, N. Y.—Reports state that a new wooden bridge will soon be constructed over the channel, at a cost of about $1,200.

MORGANTOWN, W. VA.—A bill has passed the house of representatives to allow the construction of a bridge over the Monongahela River.

MACON, GA.—Bids are asked until March 14 for a steel truss bridge of two spans, 185 and 196 ft., respectively, over the Ocmulgee River. S. B. Price, Mayor.

EUTAW, ALA.—A bill has been enacted by congress authorizing the Pensacola & Northwestern R. R. Co. to construct bridges over the Alabama River, the Warrior River, the Tennessee River and the Sipsey River, on the proposed line from Eutaw to Demopolis. S. N. Van Praag, Pres., Pensacola, Fla.

TUSCALOOSA, ALA.—The county commissioners have presented a bill to congress to authorize the construction of a bridge over the Warrior River.

MARIETTA, O.—J. Binarsch, Chn. Com., informs us that it is proposed to construct a bridge at Putnam St. The style has not yet been decided.

PAINESVILLE, O.—B. F. Morse, Cleveland, informs us that it is proposed to construct a steel truss drawbridge, 20 ft. wide, with a capacity of 100 lbs. per sq. ft., on rock foundation, between Painesville and Fairport. The people of the county are to vote at the April election whether to rebuild this bridge or not.

DETROIT, MICH.—The question of issuing $600,000 of bonds for constructing the proposed Belle Isle bridge will be submitted to a vote of the people. Permission will then be asked of the legislature.

CHICAGO, ILL.—Bids are asked by the board of trustees of the sanitary district until April 10 for furnishing the material and constructing the substructure and superstructure of a two-track railway bridge and of a highway bridge, over the Chicago River. Both structures to be of the Scherzer rolling lift bridge type, as stated in our advertising columns.

GRAND RAPIDS, MINN.—The Grand Rapids Water Power & Boom Co. has applied to congress for authority to construct a dam and bridge across the Mississippi River. D. M. Gunn, H. D. Power, D. W. Doran and others are interested.

DES MOINES, IA.—J. B. Marsh informs us that the council has passed an ordinance to construct bridges across the Des Moines River at East Sixth St. and at Sixth Ave., and has instructed the city engineer to prepare plans, which will be finished in 30 days.

FORT SCOTT, KAN.—It is proposed to construct a bridge over Mill Creek to cost about $3,500. The council can only appropriate $2,000 without submitting the question to a vote of the people.

INDEPENDENCE, KAN.—D. S. James, County Clk., informs us that bids were asked until Feb. 18 for a steel bridge, 35 x 14 ft. S. L. Hibbard, Engr., Cherrydale.

FORT SMITH, ARK.—A bill has been enacted by congress to authorize the St. Louis, Siloam & Southern R. R. Co. to construct a bridge over White River, Ark. H. D. Mackay, Pres., Pomona, Mo.

ROCKPORT, TEX.—A bill has been enacted by congress authorizing the Aransas Harbor Terminal Ry. Co. to construct a bridge over the Morris & Cummings Ship Channel in Aransas county. Chas. H. Sawyer, Gen. Mgr.; W. D. Jenkins, Ch. Engr., Aransas Pass, Tex.

YANKTON, S. DAK.—A bill has been presented to congress to authorize the Dakota Southern R. R. Co. to construct a bridge over the Missouri River at this place.

SUISUN CITY, CAL.—Bids are asked by the county clerk at Fairfield, until March 7, for a combination bridge on road No. 146. Address County Surveyor Steiger.

TORONTO, ONT.—Chas. H. Rust, Cy. Engr., has recommended that $13,000 be placed in the estimates of the department for the current year, for the construction of a new bridge over the Humber River and Lake Shore & Michigan Southern Ry.

BUILDINGS.

BINGHAMTON, N. Y.—It is reported that Gaylord & Eitapence will erect a new 6-story building, 112 × 80 ft., at State and Lewis Sts., to cost about $25,000. T. I. Lacey & Sons, Archs., 81 State St.

BROOKLYN, N. Y.—A fire in the Navy Yard in this borough, Feb. 15, destroyed the machine shop; estimated loss, about $1,000,000.——Reports state that a 7-story brick, stone and terra cotta apartment house will be erected on Ashland Place, near DeKalb Ave., to cost $60,000, for Hugh Stewart, Fulton and Bridge Sts. J. G. Glover, 186 Remsen St.

BUFFALO, N. Y.—The plans of Robert A. Wallace, of Buffalo, have been accepted for the new stone church building to be erected at North Pearl and North Sts. for the First Baptist Church; estimated cost, $50,000.

NEW YORK, N. Y.—Bids are asked by the board of education, at 585 Broadway, until March 2, for erecting a new building on Attorney St., near Rivington St., for Public School 174.——The 6-story buildings at 117 and 119 Prince St. were damaged by fire, Feb. 15, causing a reported loss of $60,000.——Plans have been filed by N. & L. Ottinger for a 7-story brick flat building on the Boulevard, near 107th St., to cost $80,000. Henry Anderson, Arch., 1180 Broadway; by J. J. Astor, 23 West 26th St., for eight 4 and 5-story brick dwellings at 130th St. and 5th Ave., to cost $72,000. A. M. Napier, Arch., 25 West 26th St.; by the city for a 5-story brick school building on 99th St., near 2d Ave., to cost $260,000. C. B. J. Snyder, Arch.; by Leith & Glenn, for a 7-story brick flat building at 114th St. and 7th Ave., to cost $80,000. Neville & Bagge, Archs., 217 West 125th St.; by L. J. Levy, 205 East Broadway, for three 6-story brick flat buildings at Catherine and Cherry Sts., to cost $85,000. Horenburger & Straub, Archs., 122 Bowery; by Andrew Brode, 1 Madison Ave., for five 5-story brick flat buildings at 504 to 512 East 81st St., to cost $100,000. Jobst Hoffman, Arch.; by Louis Bachroch, 128 Rivington St., for two 6-story brick flat and store buildings at 516 and 518 East 11th St., to cost $57,000. G. F. Pelham, Arch., 503 5th Ave.; by Neil Hansen, 1770 Amsterdam Ave., for seven 5-story brick flat and store buildings, at Amsterdam Ave. and 148th St., to cost $205,000. G. F. Pelham, Arch.; by Alex. Walker, 414 Riverside Drive, for a 7-story brick flat and store building at 81st St. and the Boulevard, to cost $200,000. G. F. Pelham, Arch.; by McCracken & Dagnell, 400 West 152d St., for three 5-story brick flat buildings on 149th St., near the Boulevard, to cost $96,000. Neville & Bagge, Archs.; by Patrick McMorrow for seven 7-story brick flat buildings on Central Park West, near 106th St., to cost $80,000. Neville & Bagge, Archs.; by J. J. White, 209 West 80th St., for a 7-story brick flat building on 80th St., near Amsterdam Ave., to cost $73,000. G. A. Schellenger, Arch., 128 Broadway; by Henry Rothschild, for four 5-story brick flat and store buildings at 5th Ave. and 119th St., to cost $92,000. G. F. Pelham, Arch.; by W. F. & C. H. Smith, 149th St. and 3d Ave., for a 7-story brick office and store building at 148th St., 3d and Willis Aves., to cost $55,000. John De Hart, Arch., 1637 Fox St.; by S. & W. Guidera, 26 East 128th St., for eleven 4-story brick flat buildings at St. Paul's Place and Brook Ave., to cost $175,000. G. F. Pelham, Arch.——The following bids were received Feb. 14 for erecting a new building for Public School 177 at Market and Monroe Sts.: P. J. Brennan, 1748 Washington Ave. (accepted), $241,000; Thomas Cockerill & Son, 550 West 41st St., $274,000; Murphy Bros., 407 East 101st St., $253,000; P. J. Carlin & Co., 289 4th Ave., $266,500; Herman Probst, 1180 Broadway, $262,850; Mapes-Reeves Construction Co., 150 Nassau St., $269,800; P. Gallagher, 156 5th Ave., $269,188; John J. Hopper, 217 West 125th St., $269,690; Luke A. Burke, 401 West 59th St., $241,250; Mahoney Bros., 52 New Bowery, $267,931; Harry McNally, 287 4th Ave., $257,507; John H. Parker Co., 256 Bowery, $253,985; Collier-Weeks Co., 163 West 23d St., $249,750, and H. W. Weed & Co., $254,400.

NEW YORK, N. Y.—Bids are asked by the board of education, at 585 Broadway, until March 6, for erecting a new building for Public School 109 on 99th and 100th Sts., between 2d and 3d Ave.——Bids are asked by the department of public charities, foot of East 26th St., until March 6, for the materials and work required for carpenter, roofing, painting and wood flooring and steel ceilings to be put in the City Hospital, Blackwell's Island.——The 5-story stone building at 457 Broadway, occupied by Belding Bros. & Co., dealers in silk, was damaged by fire, Feb. 20.

NEW BRIGHTON, PA.—The opera house and adjacent buildings were damaged by fire, Feb. 16. Reported loss, $15,000; fully insured.

PHILADELPHIA, PA.—A fire in this city, Feb. 16, destroyed three 6-story business buildings on Market St., near 13th St., causing a reported loss of $300,000.——The buildings at 211 to 215 Church St. were damaged by fire, Feb. 16, causing a reported loss of $50,000.

PHILADELPHIA, PA.—The church building of the St. John Roman Catholic Church was destroyed by fire Feb. 17, causing a reported loss of $50,000.——We are informed that the following bids were received by the department of yards and docks Feb. 18 for the construction of a workshop and boiler house for ordnance at the navy yard, League Island:

Doyle & Doak, 1509 Sansom St.	$72,896
Am. A. S. P. Construction Co., 211 South 9th St.	90,396
Structural Iron Co., Baltimore, Md.	77,500
Girard Construction Co., 1023 Witherspoon Bldg.	65,376
Samuel Gourley, Jr., 21st St. and Ridge Ave.	88,497
Geo. C. Deitrich, 935 North 7th St.	71,570
Chas. McCaul, 10 North 11th St.	76,750
Macey, Henderson & Co., 1215 Filbert St.	87,621
Stacey B. Opdyke, Jr., 1222 Belmont Ave.	76,361
Philadelphia Construction Co., 515 Girard Bldg.	86,249

PITTSBURG, PA.—The following bids were received by the department of public safety, Feb. 8, for the erection of the new No. 29 engine house at Hamilton and Braddock Aves.; Harry S. Blair, Arch.: William Kerr's Sons, with gas engine and dynamo, $24,941, without, $23,341; Martsolf Bros., $26,500 and $25,676; Kerr & Fox, $23,326 and $22,459; Lydon Henderson, $28,007 and $26,550; Daniel Whitmore, $23,091 and $22,501; D. H. Crisman, $27,500 and $26,250; F. E. McGillick, $24,500 and $23,300; Jackson & Fulton, $23,773 and $22,949.

WASHINGTON, D. C.—Bids are asked by the district commissioners until Feb. 25 for constructing an isolating building for minor contagious diseases on the grounds of the Providence Hospital.

ANNAPOLIS, MD.—Bids were received by the navy department, Washington, D. C., Feb. 16, as follows, for the erection of (a) an armory and (b) a boat house at the Naval Academy, for which an appropriation of $300,000 for each building has been made: John Dill & Sons, and D. W. Collins, Baltimore, Md., Waldoboro granite (a), $443,065; (b) $424,641; Long Cone, (a) $425,575, (b) $407,448; Concord, (a) $475,527, (b) $462,711; North Jay, (a) $502,729, (b) $483,841; Redstone gray (a) $470,728, (b) $451,848; Gilford & Waltersville, (a) $512,997, (b) $474,648; time, 27 mos. for both. Grace & Hyde, New York, (a) $425,000, (b) $420,000; time, 21 mos. Wm. H. Ellis, Cincinnati, O., Fox Island granite, (a) $418,000, (b) $417,000; Mt. Airy, (a) $425,000, (b) $422,000; Southern, (a) $437,000, (b) $434,000; Halowell, (a) $445,000, (b) $442,000; time, 30 mos. P. J. Carlin & Co., Brooklyn, N. Y., Concord granite, (a) $433,142, (b) $423,885; North Jay, (a) $460,740, (b) $450,484; Waldoboro, (a) $398,430, (b) $395,150; Bluehill, (a) $387,896, (b) $376,152; Long Cone, (a) $386,696, (b) $372,954; N. H. Gray, (a) $457,442, (b) $442,887; Redstone gray, (a) $429,281, (b) $419,887; Petersburg, (a) $385,000, (b) $370,000; time for both buildings, 2 yrs. Structural Iron Co., Baltimore, Md., for both, $976,000; time, 2 yrs. Joseph J. Churchyard, Buffalo, N. Y., (a) $438,000; time, 30 mos.; (b) $437,000; time, 30 mos. Charles McCaul, Philadelphia, Pa., (a) $450,000; time, 18 mos.; (b) $435,000, 18 mos. Woodbury & Leighton, Boston, Mass., (a) $427,500, (b) $422,500, or $480,000 for both.

LOUISVILLE, KY.—The building on Market St., between 6th and 7th Sts., occupied by C. H. Kahlert and others, was damaged by fire, Feb. 11; reported loss, $50,000.

SHEPERDSVILLE, KY.—Bids are asked by the Bullitt fiscal court until March 6 for the erection of a court house and public offices in this city. W. B. Tilden, County Clk.; Mason Maury, Arch., Louisville, Ky.

AKRON, O.—The plant and office building of the Thomas Building & Lumber Co. was destroyed by fire Feb. 15, causing a loss of about $90,000.

CLEVELAND, O.—Bids are asked by the board of control until March 10 for furnishing the heating and ventilating apparatus at the Children's Hospital, City Infirmary. Wm. J. Akers, Director of Pub. Charities.

IRONWOOD, MICH.—We are informed that the following bids were received by the board of education Feb. 15 for erecting a high school building; Charlton, Gilbert & Demar, Archs., Camp Bldg., Milwaukee, Wis.:

Dan Egan, Ashland, Wis.	$28,246
Evens & Grandy, Duluth, Minn	30,448
A. G. Taddey, Milwaukee, Wis.	28,888
Geo. S. Deeks & Co., St. Paul, Minn.	28,503
E. E. Grip & Co., Ishpeming	32,000
F. E. McCleary, Ironwood	32,600
William Kumm, Ironwood	32,500
E. A. Durrow, Ironwood	34,989

SPRINGFIELD, ILL.—Plans are being prepared, according to reports, for five new buildings to be erected on the state fair grounds, to cost about $100,000. Reeves & Baillie, Archs., Peoria, Ill.

NORTHFIELD, MINN.—Bids are asked until March 7 for the erection of an orphans' home for the Odd Fellows Society; bond, $10,000; W. G. Nye, Chn. of Com.; Harry W. Jones, Arch., Lumber Exchange, Minneapolis, Minn.

BARABOO, WIS.—The council has decided to bond the city for $30,000 for a new high school building to be erected next summer.

MILWAUKEE, WIS.—We are informed that the following bids have been recommended for acceptance for remodeling the court house of Milwaukee county: E. R. Liebert, Arch.: Mason and cut stone work, Adam Schmidt, $948; carpenter work, E. A. Vogel, $2,000; glazing, Patek Bros., $285; plumbing, P. F. Kenny, $698; plastering, Adamant Mfg. Co., $734.50; galvanized iron and tin, Biersach & Niedermeyer, $192; stucco and staff work, Milwaukee Ornamental Carving Co., $2,700; iron, Fred. Pietsch, $1,130; marble and tile, H. Niedner, $895; total, $9,447.50.

IOWA CITY, IA.—It is reported that bids will be received until about March 20 for the erection of a 3-story stone and steel building, 121 × 210 ft., to cost $175,000. Proudfoot & Bird, Archs., Des Moines, Ia.

SIOUX CITY, IA.—The erection of a new 3-story brick building for Morning Side College, to cost about $40,000, is contemplated. W. S. Lewis, Pres.

BUTTE, MONT.—Plans are being prepared for a new building to be erected in this city for the Anaconda Copper Mining Co.; estimated cost, $50,000.

KANSAS CITY, MO.—Plans have been completed for a new $25,000 memorial building for the Kansas City Orphan Boys' Home. F. E. Hill, Arch., New York Life Bldg.

ALBUQUERQUE, N. MEX.—F. W. Clancy informs us that F. P. McClure has just secured a location for the proposed opera house building to be erected in this city at a cost of from $20,000 to $25,000.

SALINAS, CAL.—It has been decided to erect a new high school building in this city to cost $30,000.

SAN FRANCISCO, CAL.—Manager Leahy, of the Tivoli theatre, is said to contemplate the erection of a new office and theatre building, to cost about $300,000.

HONOLULU, HAWAII.—Bids are asked until Feb. 26 for the construction of four school buildings and three teachers' cottages in Hawaii. Henry E. Cooper, Minister of Pub. Instruction.

WATER-WORKS.

SOUTH PARIS, ME.—The People's Water Co. has been incorporated. J. Hastings Bean, Pres.; Geo. M. Atwood, Clk. and Treas. W. B. Young, Supt., writes us that the company is composed of 30 citizens, who propose to supply the town with water.

BOSTON, MASS.—Bids are asked until 12 noon, Feb. 24, for furnishing 161 tons of cast-iron water pipe, with flexible joints. Check, $500; bond, $2,000. J. R. Murphy, Water Comr., City Hall.

BOSTON, MASS.—Press reports state that the Metropolitan Water Board will soon ask for bids for furnishing the materials for a granite dam for the new reservoir at Clinton to store water of the Nashua River in the Wachuset Valley.

HOLYOKE, MASS.—Engineer Tighe has submitted a report on the proposed new storage reservoir. A dam 500 ft. long will be built at Tatro Brook. A 20-in. main will be laid to carry water from the reservoir to the Highlands. The work will cost about $77,000. Jno. J. Sullivan, Chn. Comrs.

WORCESTER, MASS.—The water department received the following bids Feb. 16 for furnishing water gates; John G. Brady, Water Comr.: Eddy Valve Co., Waterford, N. Y. (accepted), $7,855; Coffin Valve Co., Neponset, Boston, Mass., $9,093; Chapman Valve Mfg. Co., Indian Orchard, Mass., $8,375.

CLAYTON, N. Y.—A. F. Nims, Philadelphia, N. Y., is reported to have been awarded the contract for furnishing the materials and for constructing works and a sewerage system, at about $46,000. The Babcock & Wilcox boiler and the Dean pump are to be used. Chas. Millar & Son, Utica, N. Y., have the contract for the pipe. S. S. Snell, Engr., Lowville, N. Y.

FORESTPORT, N. Y.—It is stated that this place is considering the question of works.

GENEVA, N. Y.—The question of building a new reservoir of 5,000,000 gallons capacity is being considered.

ROCHESTER, N. Y.—It is proposed to make certain extensions to the water mains, at a cost of $50,000; the Caledonia Ave. main alone costing $23,000. E. Kuichling, Ch. Engr. Water-Wks.

UTICA, N. Y.—The council proposes to submit the question of municipal works to a vote of the people.

MIDDLETOWN, PA.—Arthur King, Secy. and Gen. Mgr., Middletown & Swatara Water Co., writes us that plans have been prepared for a sand filtration plant.

MUNCY, PA.—The Muncy works, one of the plants belonging to the Continental Water-Works Co., Greensburg, Pa., will be greatly improved by the addition of a 2,000,000-gallon distributing reservoir, the laying of about two miles of 8 and 10-in. pipe and the construction of an intake on Glade Run above the present reservoir. Plans for

the improvements are being prepared by the Stanwix Engineering Co., Rome, N. Y., and work will be commenced in the spring as soon as the weather will permit.

PITTSBURG, PA.—Emil Kuichling, Ch. Engr. Water-Works, Rochester, N. Y., has submitted a report to the filtration commission on the feasibility of securing an increased water supply for this city from Indian Creek. The plan is feasible, but would cost $5,480,000 for a reservoir, etc., or $13,568,500 for a gravity system.

WASHINGTON, D. C.—Bids are asked by the district commissioners until March 11 for furnishing cast-iron water pipe, as stated in our advertising columns.

TARBORO, N. C.—J. A. Weddell, Clk., writes us that the legislature has been asked to grant this place authority to issue $50,000 in bonds for works, sewerage system and an electric plant.

SANFORD, S. C.—It is stated that the question of issuing $10,000 in bonds for works, etc., is being considered.

HUNTSVILLE, TENN.—It is stated that the council has sold $20,000 of 5% bonds for the works to Briggs, Todd & Co., Cincinnati, O.

CLEVELAND, O.—Bids are asked until March 20 for furnishing four new water cylinders and otherwise repairing and rebuilding Worthington pumping engine No. 4. Geo. R. Warden, Dir. Pub. Wks.——M. W. Kingsley, Supt. Water-Wks., has prepared plans for new pipe lines for the use of the fireboats, to cost about $20,000.

MANSFIELD, O.—The question of putting in water meters at the houses of users is being considered.

MARION, O.—The committee is securing information looking towards the purchase by the city of the works. Councilman Maag, Messrs. J. G. Fairbank and D. R. Crissinger are on the committee.

SCIO, O.—John Shaffer, Mayor, writes us that a franchise for works will probably soon be granted. The supply will be secured from wells. Population, 2,000.

ALBANY, IND.—Plans and specifications are reported to have been completed for municipal works and a light plant.

BAY CITY, MICH.—The question of securing a better water supply will probably be submitted to a vote of the people. Mayor Lind may be addressed.

WEST BAY CITY, MICH.—We are informed that it is likely that bids will be asked April 1 for furnishing the following for new works, etc.: One 5,000,000-gallon pump, 4,000 ft. of 48-in. riveted steel water pipe for intake, about 17,000 ft. of 30 to 16-in. pipe. Bonds are yet to be issued by legislative power or vote. J. H. Blomshield, Cy. Engr.

ALTON, ILL.—This city will probably soon want bids for furnishing about 27,350 ft. of 4, 6 and 8-in. cast-iron water pipe, 20 hydrants and 25 water gates. T. A. Taylor, Supt.

CHICAGO, ILL.—Bids are asked until March 1 for laying water pipe in 74th St., from Yates Ave. to Bond Ave. L. E. McGann, Pres. Bd. Local Improvements.

WHITEHALL, ILL.—Bids are asked until 7:30 p. m., Feb. 25, for furnishing a steel tower and tank for the works. T. A. Chapin, Engr., Whitehall; E. C. Pearce, Clk.

OCONOMOWOC, WIS.—W. H. Wheeler & Co., Beloit, Wis., have submitted a franchise to build works to cost about $58,000.

DUBUQUE, IA.—The Dubuque Water Co. has awarded the contract for furnishing two 8,000,000-gallon pumping engines to the Holly Mfg. Co., Lockport, N. Y. The company is also said to have ordered about 3,000 tons of pipe.

UTE, IA.—This town has voted to issue bonds for works, according to reports.

ST. PAUL, MINN.—Bids are asked until 12 noon, Feb. 24, for furnishing special castings, hydrants, valves, service boxes, pig lead, etc.; estimated cost, $20,000. John Caulfield, Secy. Water Comrs., 23 E. 5th St.

JAMESTOWN, N. DAK.—Bids are asked until Feb. 27 for sinking a 6-in. artesian well for a depth of 1,500 ft. G. C. Eager, Cy. Audr.

ST. LOUIS, MO.—Bids are asked until March 21 for furnishing and installing at high service pumping station No. 1 three vertical triple expansion, crank and flywheel, condensing pumping engines, etc., to cost about $300,000. Deposit, $7,575. Robt. E. McMath, Pres. Bd. Local Improvements.

DENTON, TEX.—The Denton Water, Light & Power Co. has decided to begin the building of an extension to its works on March 1. About 12,000 ft. of pipe and 16 new hydrants will be required. H. C. Storrie, Gen. Mgr.

WILLSPOINT, TEX.—It is stated that a Chicago company has been granted a franchise for works, a light plant and a telephone system.

SILVERTON, COL.—Surveys for the new works have been completed, and it is stated that work will be begun in the spring. The water supply will be secured from the reservoir on Bear Creek.

FAIRHAVEN, WASH.—The Fairhaven City Water & Power Co., it is stated, will want bids in March for extending the mains, etc., at a cost of about $10,000.

SEATTLE, WASH.—Local papers state that new bids will be asked at once for constructing the Cedar River water-works addition. Bids were asked until Nov. 15, 1898, for this work, but only one bid was received, that from Gahan & Byrne, 4209 Halsted St., Chicago, Ill., at $1,238,622, as noted in our issue of Dec. 1.

GOLDHILL, ORE.—The question of building works in the spring is being considered.

PORTLAND, ORE.—The council has decided to enlarge the pumping capacity of the works.

LAKEPORT, CAL.—Bids are asked until April 10 for the purchase of $15,400 of water bonds, and until about April 11 for furnishing the materials and for constructing the works. H. V. Keeling, Town Clk.

JEROME, ARIZ.—W. A. Clark, it is stated, proposes to build works for this place.

HEBER CITY, UTAH.—A. C. Hatch writes us that a company is being formed to build works.

BERLIN, ONT.—Bids are asked until March 1 for sinking pipe wells. W. M. Davis, Supt. Water-Wks.; H. J. Bowman, Secy. Comrs.

ST. MARY'S, ONT.—The question of works and a sewer system is being considered by the board of trade. Robt. Dickson, Chn.

STAYNER, ONT.—Bids are asked until March 1 for constructing works to cost $24,000. John Galt, Engr., Canada Life Bldg., Toronto, Ont.; Wm. McBeth, Chn. Com.

VANCOUVER, B. C.—This city voted Feb. 4 in favor of the by-law to raise $100,000 for extending the works.

YOKOHAMA, JAPAN.—Press reports state that contracts will soon be let by the municipal authorities of this city for furnishing about 20,000 tons of cast-iron water pipe. Further information may possibly be secured from the Japan-American Commercial & Industrial Association, Times Bldg., New York.

SEWERAGE.

SPRINGFIELD, MASS.—Local papers state that work on the proposed Mill River valley sewer will begin in the early spring. There will be about 14,000 cu. yds. of earth excavation and 4,000 cu. yds. of rock. The sewer will be over one mile long from the outlet to the Watershops. It will require about 2,300 cu. ft. of brick masonry and about 600 ft. of under-drain. About 80 cu. yds. of concrete will be required for the bulkhead, which must be built at the outlet. The cost of the work is estimated at $50,000. Chas. M. Slocum, Cy. Engr.

DANBURY, CONN.—We are informed that about 4,200 ft. of 10-in. pipe sewer will be built this season; estimated cost, $4,000. No contract is likely to be let. A. L. Davis, Cy. Engr.

HARTFORD, CONN.—C. H. Bunce, Cy. Engr., has prepared plans for a storm water ditch to relieve the Franklin Ave. sewer. It will be 2,000 ft. long, 3 ft. deep and 18 ft. wide at the top.

MERIDEN, CONN.—Bids are asked until March 2 for constructing about 13,000 ft. of pipe sewers and 4,000 ft. of storm water sewers. W. S. Clark, Cy. Engr.

CLAYTON, N. Y.—The contract for furnishing the materials and for building the system and water-works has been let to A. F. Nims, Philadelphia, N. Y., at $46,000. Work will begin at once. Sidney S. Snell, Engr., Lowville, N. Y.

JAMAICA (L. I), N. Y.—Plans, etc., for the proposed sewage disposal beds for the system here are completed. About $160,000 was spent on the construction of the system before Jamaica became a part of New York city. Matthew J. Golden, Deputy Comr. of Sewers.

NIAGARA FALLS, N. Y.—The following submitted bids to the board of public works Feb. 10 for constructing sewers in several streets: D. Phillips & Co., nine streets, about $17,800; W. W. Read & Co., eight streets, about $11,000; W. H. Cookman, seven streets, about $11,200; C. Crogan, three contracts, $5,000.

SYRACUSE, N. Y.—The board of health has proposed that brick smokestacks be built for ventilating the main branches of the system. O. A. Thomas, Health Officer.

WATERTOWN, N. Y.—Mayor Wise favors an amendment to the charter providing for the construction of main sewers to cost about $112,000. Messrs. Sloat, Havens and Longton, of the board of public works, may be addressed.

CHESTER, PA.—Bids will soon be asked by the committee for constructing sewers in West 6th St.

GREENVILLE, PA.—It is stated that this place has decided to build certain sewers and pave portions of five streets at a cost of $10,000.

PHILADELPHIA, PA.—Bids are asked until 12 noon, Feb. 23, for constructing certain main and branch sewers, inlets, etc., and dredging. Thos. M. Thompson, Dir. Dept.

TUNKHANNOCK, PA.—Bids will probably soon be asked, according to reports, for completing the system, at a cost of about $6,250.

WILKES-BARRE, PA.—It is probable that the council will vote an appropriation of $20,000 for a new sewer at the Empire.——Thos. Cassidy writes us that an ordinance has passed the first reading appropriating $60,000 for about three miles of brick and pipe sewers. W. V. Ingham, Cy. Engr.

WINCHESTER, VA.—The council, it is stated by local papers, will soon take action towards the construction of the proposed system to cost $20,000.

TARBORO, N. C.—J. A. Weddell, Clk. and Treas., writes us that the legislature has been asked to grant this place authority to vote on the question of issuing $50,000 in bonds for a system, water-works and an electric plant.

GAINESVILLE, FLA.—Jas. M. Graham, Dr. J. F. McKinsley, Jr., B. F. Hampton and C. W. Bartleson have organized a company which proposes to build a system under a franchise which will soon be asked for.

CLEVELAND, O.—Bids are asked until Feb. 24, Mar. 1, 2, 3, 10, 15, 16 and 17 for constructing sewers in a number of streets, including the Walworth Run sewer, as advertised in Engineering News. G. R. Warden, Dir.

DESHLER, O.—Bids are asked until Feb. 25 for constructing a 6-in. pipe sewer in Main St. F. A. Meeker, Clk.

NILES, O.—Bids are asked until March 7 for furnishing the materials and for constructing certain sewers. W. T. Sayers, Clk. Sewer Comrs.

BLOOMINGTON, ILL.—The council is in favor of the construction of a double-ring conduit sewer in the valley to cost $3,000. Mayor Koch and Alderman Dooley may be addressed.

MINNEAPOLIS, MINN.—The council has selected 15 streets in which to build sewers to cost about $23,000.

ST. CLOUD, MINN.—Otis F. Doyle, Chn. Com. on Parks and Sewers, writes us that plans for the proposed half mile of sewers are in the hands of the board of public works. J. A. McDonald, Mayor.

GRAND ISLAND, NEB.—Arnold C. Koenig, Cy. Engr., writes us that this city will soon ask for bids for constructing 1,376 ft. of 8-in. pipe sewers, with manholes, lamp-holes and flush-tanks. This work will be followed by several other extensions of from 1,000 to 3,500 ft. each.

KANSAS CITY, MO.—Bids are asked until Feb. 28 for constructing certain sewers. H. A. Wise, Cy. Engr.

DENVER, COLO.—The J. M. O'Rourke Construction Co., Denver, has been awarded the contract for constructing the Capitol Hill sewer at $309,735. Jas. J. Fleetwood refused to accept the contract at his bid of $244,159.

MEDFORD, ORE.—The Mayor writes us that it is proposed to construct 4,000 to 5,000 ft. of 16, 10 and 8-in. pipe sewers; average cut, 6 ft. G. M. Dodge, Engr., San Rafael, Cal.

HONOLULU, H. I.—Bids are asked until April 15 for furnishing materials for sewer construction, pumping machinery, etc., as described in our advertising columns. Rudolph Hering, 100 William St., New York; Jas. A. King, Minister of the Interior.

GARBAGE DISPOSAL—STREET CLEANING

NEW YORK, N. Y.—Bids are asked until March 10 for receiving and finally disposing of street sweepings, ashes, garbage and household refuse in the boroughs of Queens and Richmond. Jas. McCartney, Comr. St. Cleaning, 346 Broadway, Manhattan Borough.

WATERTOWN, N. Y.—Bids will probably be asked by the health office for garbage collection.

MEMPHIS, TENN.—Dr. Jones, of the board of health, has been allowed an appropriation of $60,000 with which to build two additional crematories.

LOUISVILLE, KY.—R. B. Gilbert, M. D., writes us that the city is investigating methods of incinerating garbage. The committee, of which Dr. Gilbert is a member, has not determined upon a system as yet.

KANSAS CITY, MO.—Local papers state that the question of a better method of cleaning the asphalt streets is being considered.

LOS ANGELES, CAL.—The council has had submitted to it two plans for garbage disposal. Bids will probably soon be asked on each plan.

STREETS AND ROADS

BOSTON, MASS.—The council has been requested to appropriate $20,000 for resurfacing Grove, Phillips and Garden Sts.

CHATHAM, MASS.—It has been voted to construct a mile of crushed stone road on Main St.

SOUTHBRIDGE, MASS.—The selectmen have received a petition to have plans prepared for a new highway between this town and West Dudley.

MERIDEN, CONN.—W. S. Clark, Cy. Engr., writes us that about $20,000 will be expended for paving this coming summer.

BROOKLYN, N. Y.—Bids are asked until March 7 for grading and macadamizing on portions of Park Place, Ave. B, Ocean Ave. and 84th St. Jas. P. Keating, Comr. Highways, 150 Nassau St., New York.

ILION, N. Y.—A. D. Morgan, Village Pres., writes us that the town has voted to appropriate money for the purchase of a stone crusher. The boards having charge of the matter will be reorganized in three to eight weeks. Until then nothing will be done.

STAPLETON (S. I.), N. Y.—The borough board, Richmond, has received a petition to macadamize on Ward Ave., at a cost of $2,750.

PATERSON, N. J.—The board of aldermen has passed an ordinance to pave about 60,000 to 70,000 sq. yds. this year.

BETHLEHEM, PA.—R. E. Neumeyer, Borough Engr., informs us that 60,000 sq. yds. of macadam, estimated cost, $39,000, will be constructed by day labor. The stone is furnished by contract at the quarry, and the town does its own crushing.

GREENVILLE, PA.—This place has decided to construct paving and sewers on five streets, at a cost of $10,000 according to reports.

PHILADELPHIA, PA.—Bids are asked until 11 a. m., Feb. 23, for the completion of East Side Drive, Lincoln Ave., continuation of river wall and rubble masonry. Jesse T. Vogdes, Ch. Engr. and Supt., Comrs. of Fairmount Park.——The council has awarded a contract to Michael O'Rourke, at $234,500, for repairing paved streets.

BALTIMORE, MD.—An ordinance will be presented to the council for constructing an additional width of roadway, 40 ft. wide and 1 1-5 miles long, along the Pimlico Boulevard, at a cost of about $42,000. We are informed that Frank H. Sloan, Engr., is preparing plans, and that specifications will not be made until legal matters are arranged.

ATHENS, ALA.—Geo. Malone, Clk. Circuit Court, informs us that there will be an election sometime this summer to vote on the question of issuing $100,000 of bonds, providing the bill passes the legislature.

FLORENCE, ALA.—John B. Weakley, Jr., Mayor, writes us that the legislature has passed a law authorizing this city to pave and otherwise improve the streets and sidewalks. No general plan has yet been formed. The mayor would like information as to the cost of stone curbing.

DECATUR, IND.—W. E. Fulk, County Surveyor, writes us that the following bids were received Feb. 16 for constructing the East Washington macadam road: E. Woods & Co. (accepted), $15,975; Calvin Miller, $15,998; Huffman & Liddy, $17,368; Modlin Bros., $16,788; Dunn & Goar, $16,748.

INDIANAPOLIS, IND.—Bids are asked by the board of public works until March 1 for grading, gravelling and rolling on four streets and for grading and paving with cement, class B, on portions of six streets.

KOKOMO, IND.—Bids are asked until March 13 for 12,000 sq. yds. of brick paving and 6,000 lin. ft. of curb. Jackson Morron, Cy. Engr.; Chas. R. Ford, Cy. Clk.

TERRE HAUTE, IND.—The street committee has decided to pave Sycamore St. east of Ninth St., and has ordered the city engineer to prepare plans for concrete sidewalks on Fourth St.

COLDWATER, MICH.—Riggs & Sherman, 613 The Nasby, Toledo, O., have again been retained by the council this year for paving and sewerage work.

GRAND RAPIDS, MICH.—Bids are asked by the board of public works until Feb. 24 for brick paving on Ottawa St., between Bridge and Fairbanks Sts. The bids received Feb. 10 have been rejected.

PEORIA, ILL.—Bids are asked until Feb. 27 for furnishing the material and constructing about 21,650 sq. yds. of brick paving, 2,489 lin. ft. of cement curb, setting 10,348 lin. ft. of cement curb, and 9,249 cu. yds. of excavation, as stated in our advertising columns. C. W. Manning, Pres. Bd. Local Improvements; A. D. Thompson, Cy. Engr.

RACINE, WIS.—Representative Eaton will present a bill to the legislature to construct a state road from the southern boundary of the state to Milwaukee, and appointing Jared Thompson, Jr., Chas. Koch, A. P. Colby, Wm. Smith and Geo. Yule as commissioners.

CLINTON, IA.—Bids are asked until March 1 for about 3,000 cu. yds. of grading and 2,200 cu. yds. of macadamizing. L. Rutenbeck, County Audr.

ST. PAUL, MINN.—Bids are asked until Feb. 23 for removing wooden pavement and surfacing with gravel on Ninth St., and for constructing gravel walks on certain streets. C. H. Bronson, Clk. Bd. Pub. Wks.——The council has passed resolutions to pave Eagle St. with granite or sandstone between Exchange and Third Sts.

BUTTE, MONT.—The committee has proposed to pave portions of Granite St., Broadway, Park and three other streets.

KANSAS CITY, MO.—Bids are asked until Feb. 28 for furnishing the material and grading on portions of six streets. Henry A. Wise, Cy. Engr.

SEATTLE, WASH.—Two state road bills are before the legislature, one providing for a road from Port Angeles to Hoquiam, appropriating $18,000, and the other for a road from Birds View to Baker Lake, appropriating $10,000.

FRESNO, CAL.—Bids are asked until 10 a. m., Feb. 25, for furnishing the material and constructing the Cemetery Road. G. W. Cartwright, Cy. Clk.——A petition has been presented to the trustees for the paving of K St., between Fresno and Merced Sts.

SACRAMENTO, CAL.—The assembly has reported favorably on a bill appropriating $25,000 for the construction of a state highway from Sacramento to Folsom.

SAN DIEGO, CAL.—The board of public works has awarded contracts for grading to John Englebret, at $1,675, and Goodbody & Rosner, at $1,300.

MANUFACTURING PLANTS.

BROOKLYN, N. Y.—A 5-story brick mill construction factory will be erected at Nostrand and Flushing Aves., for Webster & Anderson, 171 Broadway, New York, to cost about $50,000. David W. King, Arch., 1133 Broadway, New York.

CHESTER, PA.—The main foundry and engine room of the Crown Smelting Co. was burned, Feb. 16, causing a reported loss of about $25,000.

PHILADELPHIA, PA.—The cloth mill of James Pollock, Oxford and Josephine Sts., Frankford, was damaged by fire, Feb. 10, causing a loss of about $40,000.——John R. Wiggins has been awarded the contract to erect a 4-story brick building, 60 x 164 ft., for the Scott Paper Co., at 6th St. and Glenwood Ave.

READING, PA.—The 3-story building in this city occupied by John & Bros., wool hat manufacturers, was destroyed by fire, Feb. 13, causing a loss of about $80,000.

ROCK HILL, S. C.—Cramer & Co., Charlotte, N. C., have been awarded a contract for the erection of a $90,000 cotton mill for the Highland Park Co., at Rock Hill, to contain 5,000 spindles.

HUNTSVILLE, ALA.—The Merrimac Mfg. Co., Lowell, Mass., is reported to have contracted for the erection of a new spindle mill, bleachery, etc., at Huntsville, to cost about $200,000.

KNOXVILLE, TENN.—The Greer Machinery Co.'s plant in this city was damaged by fire, Feb. 14; estimated loss, $75,000.

BENTON HARBOR, MICH.—E. H. Dyer & Co., Cleveland, O., are reported to have received the contract for the erection of a beet sugar factory at Benton Harbor for a local company, with a capacity of about 400 tons of beets a day; estimated cost, $250,000.

CHICAGO, ILL.—The bicycle factory and machine shop of I. Silverman & Bros., 109 West 14th St., was partly destroyed by fire, Feb. 15, causing a loss of about $75,000. Frank Wenter, Owner.

PORT WASHINGTON, WIS.—A fire in this city, Feb. 19, destroyed the plant of the Wisconsin Chain Co., covering three blocks. Reported loss, about $300,000; fully insured.

GRAND JUNCTION, COLO.—The Colorado Sugar Mfg. Co. is stated to have awarded a contract to E. H. Dyer & Co., Cleveland, O., for the erection of a new fireproof beet sugar factory at this place, which is expected to handle 40,000 tons the first year. The main building will be three stories in height, 276 x70 ft. Work must be completed by Sept. 15. John F. Campion, Pres.

GAS PLANTS.

NEW CANAAN, CONN.—A petition has been presented to the legislature for the incorporation of the New Canaan Gas Co., according to reports.

NEW MILFORD, CONN.—A petition is before the legislature to authorize the incorporation of the Cable Gas Co., according to reports.

COOPERSTOWN, N. Y.—The Cooperstown Gas Works were destroyed by an explosion Feb. 10.

NEW ROCHELLE, N. Y.—Bids are asked by the village clerk until March 6 for lighting the streets with gas or electricity or both.

DARBY, PA.—It is reported that the Darby Gas Co. will construct a new plant in the spring.

RICHMOND, VA.—Jos. Wallerstein, Chn., writes us that the committee expects to consider the question next week of making a number of improvements to the gas plant.

BIRMINGHAM, ALA.—Representative Burkhalter has introduced a bill in the legislature to authorize the city of Birmingham to purchase and operate municipal gas works and providing for an issue of bonds, according to reports.

FOSTORIA, O.—Reports state that the Heat & Light Co., J. A. Rider, Engr., has awarded a contract to the United Gas Improvement Co. for installing a Lowe water gas plant, with a capacity of 250,000 cu. ft. per day, including purifiers, exhausters, etc.

WARREN, O.—It is reported that a Cleveland company has applied to the council for a franchise to construct and operate a coal gas plant.

ANN ARBOR, MICH.—The Ann Arbor Gas Co. has increased its capital from $60,000 to $100,000, and proposes to construct a new generating plant in the spring to cost $30,000.

CHICAGO, ILL.—The People's Gas Light & Coke Co. has awarded a contract to Bartlett, Hayward & Co. for constructing a storage holder of 5,000,000 cu. ft. capacity, according to reports.——The Ogden Gas Light Co., according to reports, proposes to construct a new holder with a capacity of 2,500,000 cu. ft.

HANCOCK, MICH.—The council is considering a petition for a franchise to construct and operate gas works; population, about 3,500, according to reports.

OAKLAND, CAL.—The Oakland Equitable Gas Co. has purchased a site on First St., between Market and Castro Sts., for its proposed new plant, to have a capacity of about 4,000,000 cu. ft. per day. Plans are completed. Capital stock, $1,500,000. Pres., W. J. Dingee; Directors: W. G. Henshaw, W. L. Landers, Oakland.

STRATFORD, ONT.—L. L. Merryfield, Engr., Toronto, has been engaged to prepare plans for reconstructing the city gas works, according to reports.

NEW COMPANIES.—Tioga Heating & Illuminating Co., Tioga, Pa.; $5,000, with $500 paid in; to mine for and supply natural gas in Tioga county; Philo Tuller, Treas.; T. A. Wickam, C. A. Nearing, G. G. Saxton, F. B. Smith.

Rochester Gas Engine Co., Rochester, N. Y.; $25,000; J. J. Leary, F. P. Wells and Chas. M. Shaw, all of Rochester.

Port Washington Oil & Gas Co., Port Washington, O.; $6,000; to drill for oil and gas; Christian Wiand, Robert K. Emerson, A. C. Stoker, John Price, William A. Gold.

Minerva Oil Co., Minerva, O.; $10,000; to drill for oil and gas; Jacob Shumacker, E. S. De Ford, D. D. McClenlons, F. A. McKeefe, E. M. Jerome.

Citizens' Gas Light & Heating Co., Findlay, O.; $300,000.

MISCELLANEOUS CONTRACTS.

DRY-DOCK.—Portland, Ore.—Wolff & Zwicker propose to construct a steel floating dry-dock at this place, to cost about $250,000.

PIER.—New York, N. Y.—The Brooklyn Ferry Co. has been granted permission to extend its pier at East 42d St. 150 ft. into the river.

BOILER AND REPAIRS.—New York, N. Y.—Bids are asked by the department of correction, 148 East 20th St., until March 2 for installing a new boiler and certain repairs to the steamer "Wm. L. Strong." T. J. Lantry, Comr.

PILE PROTECTION.—Cincinnati, O.—Bids are asked until March 18 for pile protection for the fair grounds at Carthage. E. L. Lewis, County Audr.

WALL AND WHARF.—Sacramento, Cal.—The city engineer has estimated the cost of the proposed concrete wall and wharf on the water front from L to N St., at $130,000.

HARDWARE, ETC.—New York, N. Y.—Bids are asked by the department of parks, Arsenal, Central Park, until March 2 for furnishing plumbers' supplies and hardware.

PARK WORK.—New York, N. Y.—Bids are asked by the department of parks, Arsenal, Central Park, until March 2 for preparing the ground for planting in Riverside Park.

TELEPHONE WORK.—Omaha, Neb.—The Nebraska Telephone Co. proposes to construct about 700 miles of new line this coming season, involving an investment of about $275,000. Pres., Casper E. Yost.

PORTLAND CEMENT.—Washington, D. C.—Bids are asked by the district commissioners until March 11 for furnishing about 20,000 bbls. of Portland cement, as stated in our advertising columns.

TELEPHONE SYSTEM.—Anderson, Ind.—The Anderson Telephone Co. is being organized to construct a system to cost about $50,000, for which a franchise will soon be asked. Address Robert H. Cokefair.

PIER WORK.—Duluth, Minn.—A contract was awarded Feb. 17 to Chas. Stone, St. Paul, for constructing one pier and for substructure blocks of the second pier of the Duluth ship canal, at about $38,000, according to reports.

COAL POCKETS, CONVEYORS, ETC.—Brooklyn, N. Y.—The Bush Co., Ltd., 27 William St., New York, is receiving estimates for coal pockets, conveyors, and trestle work, at its pier, foot of 42d St., Brooklyn, and also for a floating bridge.

RAILROAD CROSSINGS.—Williamsport, Pa.—Bids are asked by the council until March 8 for constructing the city's portion of an undergrade crossing at East Third St. and Philadelphia & Erie R. R., as described in our advertising columns. Geo. D. Snyder, Cy. Engr.

RIP-RAP ROCK, ETC.—Rock Island, Ill.—Bids are asked until March 15 for furnishing about 60,000 cu. yds. of rip-rap rock, and about 107,000 cu. yds. of brush on the upper Mississippi River, as stated in our advertising columns. Capt. C. McD. Townsend, U.S. Engr., Rock Island.

STEEL HULL.—New Orleans, La.—Capt. Henry Jervey, U. S. Engr., New Orleans, informs us that the following bids were received Feb. 13 for furnishing a steel hull, etc., for a dredge, advertised in Engineering News: Springfield Boiler & Mfg. Co., Springfield, Ill. (accepted), $14,650; Edw. J. Howard, Jeffersonville, Ind., $18,840; Mississippi Valley Constructing Co., St. Louis, Mo., $14,735; Iowa Iron Works, Ltd., Dubuque, Ia., $19,512.

CONTRACT PRICES.

GRADING.—New York, N. Y.—The following bids were received by the department of highways, 150 Nassau St., Feb. 14, 1899, for completing the abandoned contract for regulating, grading, setting curbstones, flagging the sidewalks and laying crosswalks in Webster Ave., from Mosholu Parkway to the city line, borough of the Bronx:

Quantities.		P. J. Duffy.	Edw. J. Farrell.
Earth excavation	14,000 cu. yds.	$0.14	$0.35
Rock excavation	7,500 " "	1.00	1.05
Filling	67,500 " "	.43	.25
Curb	22,250 lin. ft.	.46	.57
Flagging	92,500 sq. ft.	.20	.21
Crosswalk	10,800 lin. ft.	.46	.72
Dry rubble masonry	710 cu. yds.	1.00	2.50
Rubble masry. in mortar	6,200 " "	2.50	4.98
Broken range ashlar	70 " "	2.50	10.00
Bluestone coping	2,250 lin. ft.	.40	.90
Brick masonry	10 cu. yds.	4.75	11.00
12 to 18-in. vitrified pipe	570 lin. ft.	.60	1.00
Lumber	1,000 ft. B.M.	5.00	45.00
Total		$80,868	$106,538

PAVING.—Atchison, Kan.—Fred. Giddings, Cy. Engr., writes us that the following contract was let Feb. 6, 1899, to the Atchison Paving Brick Co. for repaving South 4th Ave. with vitrified brick on old concrete foundation, the street is now paved with cedar blocks:

Paving	16,555 sq. yds.	$0.70
Oak lumber	1,088 ft. B.M.	25.00
Cement curb, 6 x 7 x 20 ins.	232 lin. ft.	.48½
Cement curb, 5 x 6 x 20 ins.	492 " "	.45½
Curb reset	490 " "	.10
Cast-iron bridge plates	5,200 lbs.	.01¾
Brick sidewalk	1,600 sq. ft.	.05½
Tile relaid	150 lin. ft.	.30
Cedar blocks removed	2,752 cu. yds.	.01
Total		$12,253

SEWERS.—New York, N. Y.—We are informed that the following bids were received by the commissioner of sewers Feb. 15, 1899, for constructing a sewer in 125th St., between Lenox and 8th Aves.:

Bidder.	28x42-in. brick sewer, 3,130 lin. ft.	15-in. vitrified pipe, 30 lin. ft.	12-in. pipe culvert, 50 lin. ft.	6-in. house cons. 600 lin. ft.	Fencing, 3,000 lin. ft.	Lumber, 325 M. ft., B. M.	Total.
Frawley & Rooney	$8.50	$5.50	$2.00	$0.50	$0.10	$5.00	$29,095
A. S. Traub	12.80	5.00	1.00	1.00	.10	.10	41,197
Farrell & Hopper	9.95	6.00	5.90	5.60	.50	25.00	44,604
Cunghm & Kerns	7.25	4.60	1.00	.50	.01	.01	23,196
W. J. Ford	9.00	5.00	1.00	1.00	.10	2.00	29,920
J. Pelkington	7.25	4.00	1.00	1.50	.10	5.00	25,688
Patterson Con. Co	5.40	2.00	1.00	.40	.10	18.00	23,402
W. J. Moore	8.00	5.00	2.00	.25	.01	.01	25,473
P. F. Brennan	9.00	4.00	2.00	1.00	.30	20.00	36,390

SETTING CONCRETE BLOCKS.—Duluth, Minn.—We are informed that the following bids were received by Maj. Clinton B. Sears, U. S. Engr., Duluth, Feb. 16, 1899, for setting concrete footing blocks and building concrete superstructure in place on south pier of Duluth Ship Canal, and for building and piling concrete footing blocks for the north pier of Duluth Ship Canal; (A) footing blocks complete, 606, each; (B) building in place 7,634 cu.yds. of concrete superstructure, complete, price a cu. yd; (C) building and piling 2,310 cu. yds. of concrete footing blocks, complete, price a cu. yd.:

	A.	B.	C.	Total.
Ming & Steele, Duluth	$10.50	$6.10	$5.25	$65,898
Frank Campbell, Duluth	*3,000	4.05	3.90	42,927
MacLeod, Campbell & SmithCo	7.75	5.50	5.50	60,009
Engle & Osman, Duluth	5.00	3.91	3.50	41,364
Charles Stone, St. Paul, Minn. †	2.10	3.65	3.90	38,314
Butler-Ryan Co., St. Paul	8.00	4.25	3.90	46,942
P. McDonnell, Duluth	8.00	4.75	5.25	53,877

*Bidder says these figures are in total. †Cement and gravel furnished by the United States.

CONCRETE DAM.—Columbus, O.—Julian Griggs, Ch. Engr., writes us that the following bids were received Feb. 16, 1899, for furnishing the materials and for constructing a concrete masonry dam for the water-works, as advertised in Engineering News; bids of former openings for this work were given in our issues of Sept. 22 and Oct. 20, 1898; the city will furnish cement:

Bidder.	Excavation, cu. yds. Earth. Dry. 5,000	Wet. 3,500	Rock. 1,200	Concrete mas'y. 19,000 c. yds.	Total.
Hoffman & Innis[1]	$0.30	$1.00	$0.80	$2.00	$43,960
Willard & Cornwell[2]	.24	1.25	1.25	1.95	44,125
Ryland & Kanmacher[1]	.30	1.00	1.00	2.00	44,200
F. M. Hoover[1]	.30	1.00	1.00	2.16	47,240
Sullivan & Graham[1]	.35	1.25	1.50	2.35	52,575
S. O. Casparis[1]	.35	1.50	1.50	2.32	52,800
W. H. Luchtenberg[1]	.30	1.30	1.50	2.40	53,450
Geo. B. Swift[3]	.25	2.00	1.00	2.55	57,900
Alex. Tubman[4]	.35	1.00	1.25	3.00	63,750
Walter Bradley & Co.[5]	.25	.50	.80	3.17	64,190

[1]Columbus, O. [2]Louisville, Ky. [3]Chicago, Ill. [4]Cleveland, O. [5]Oswego, N. Y.

Cement (Portland) for the dam—estimate, 19,000 bbls.:

Bidder.	Cooperage.	Cloth.	Paper.	Brand.
Empire Portland Cem. Co.[1]	$2.58	$2.53	$2.43	Empire.
Rock Plaster Mfg. Co.[2]	2.15	1.94	1.99	Tiger.
E. E. Stitt, Columbus, O.	2.05	1.85	1.94	Diamond.
Acme Paving Co., Columbus	2.25	2.10	1.98	Atlas.
Garden City Sand Co., Chicago	2.19	2.39	2.04	Star.
J. P. Carlile, Columbus	2.10	1.89	1.94	Medusa.
A. Tubman, Cleveland, O.	2.30	2.25	2.18	Castalia.
Kelly Island L. & T. Co.[3]	2.15	1.95	2.00	Lehigh.

[1]Warners, N. Y. [2]Columbus, O. [3]Cleveland, O.

WATER DEPARTMENT SUPPLIES.—Hamilton, Ont.—The fire and water committee let the following contracts, Feb. 8, 1899, for furnishing water department supplies: Lead Pipe—Wood, Vallance & Co., $5.10 a ton; Cast-iron Pipe—Gartshore-Thompson Co., $27.00 a ton; Special Castings—City Brass Co., $2.25 a 100 lbs.; Ordinary Castings—Gartshore-Thompson Co., $1.75 a 100 lbs.; Iron Stop-cock Boxes, 500—Burrow, Stewart & Milne, $1.10 each; Hose—Gutta Percha Co., 37 cts. a ft.; Tanks for street water wagons—A. Winckler, $20 each. The lowest tender for pig lead was that of Franklin Bros., Toronto, at $3.75 a ton, but the committee awarded the contract to a local firm, Adam Hope & Co., at $3.90.

WATER PIPE.—Malden, Mass.—Geo. W. Barrett, Water Registrar, informs us that the following bids were received Feb. 18, 1899, for furnishing 334 lengths of 6-in., 125 lengths of 8-in., and 575 lengths of 12-in. cast-iron water pipe f. o. b. Malden; the ton to be 2,240 lbs.; the McNeal company bid $20.45 a ton for 12-in.:

	A ton.
R. D. Wood & Co., Philadelphia, Pa.	$20.20
M. J. Drummond & Co., New York, N. Y.	20.28
Fox & Engel, New York, N. Y.	20.35
McNeal Pipe & Foundry Co., Burlington, N. J.	21.75
Warren Foundry & Machine Co., New York, N. Y.	20.90
American Pipe & Foundry Co., Chattanooga, Tenn	21.73

ARTESIAN WELL.—Bridgeton, N. J.—The freeholders committee having the construction of the new insane hospital in charge on Feb. 10, 1899, awarded the contract for sinking a 6-in. artesian well at the hospital to Jos. W. Pratt, Westville, N. J., at $2.50 a ft. The well will be fitted with the best material and will be completed in March. The well will probably have to be driven about 125 ft. The only other bid was submitted by Thos. B. Harper, Philadelphia, at $2.75 a ft.

SPECIAL CASTINGS.—Worcester, Mass.—The following bids were received by R. B. Dodge, Jr., Mayor, Feb. 13, 1899, for furnishing iron castings to the water department: Rice, Barton & Fales, 2 7-16 cts. new, 40 cts. a 100 for old, castings; Wheeler Foundry, new 2¼ cts., old 45 cts.; Arnold & Pierce, new 2¼ cts., old 50 cts.; Holyoke Machine Co., new 2½ cts., old 30 cts.; Prespey Pero, new 2¼ cts., old 50 cts.; Junction Foundry, new 2 cts., old 50 cts. (accepted).

INDUSTRIAL NOTES.

THE LUFKIN RULE CO., Saginaw, Mich., is introducing a 50-ft. steel measuring tape known as the "Reliable Junior." It weighs but 5 oz., including its leather case.

THE BULLOCK ELECTRIC MFG. CO., of Cincinnati, O., announces that it has moved its manufacturing plant to East Norwood, O., but the mail address will continue to be at Cincinnati. The new plant is said to have no shafting or belting, every tool having an independent motor with a new method of variable speed control.

THE AMERICAN FOUNDRY & CAR CO., the incorporation of which was noted in our last issue, is reported to have also secured control of the Buffalo Car Mfg. Co. and the Niagara Wheel Co. Buffalo, N. Y., the Ensign Mfg. Co., Huntington, W. Va., and the car plant of Pennock Bros., Minerva, O.

THE LAKE ERIE ASPHALT BLOCK CO., of Pittsburg, Pa. (in which the New Castle Asphalt Block Co., of the same city, is interested), is building a new plant at Toledo, O., for the manufacture of asphalt paving blocks. The New Castle company laid about 110,000 sq. yds. of this paving during 1898.

THE BALTIMORE & OHIO R. R. CO. has purchased 30,394 cars and 216 locomotives since March 1, 1896. The company recently placed orders with the Pressed Steel Car Co. and the Carnegie Co. for 5,000 steel coal cars and has also recently purchased five postal cars, ten express cars, ten combination cars and six dining cars.

THE VIRGINIA COAL, IRON & RY. CO., which was recently organized with $5,000,000 capital, has acquired the South Atlantic & Ohio R. R., 71 miles long; the Bristol, Elizabethton & North Carolina Ry., 22 miles long, and iron furnaces at Bristol, Tenn., and Marion, Maxmeadows, Pulaski, Salem and Roanoke, Va., including 6,000 acres of iron ore land and 125,000 acres of coal land. Mr. Geo. L. Carter, for ten years past President of the Carter Coal & Iron Co., has been elected General Manager of the new company.

MR. WILLIAM CLIFFORD, Pittsburg, has the contract, it is stated, to build a large ventilating fan for the Fitchburg R. R. Co., which will be placed at the top of the 1,050-ft. shaft ventilating the Hoosac Tunnel at North Adams, Mass. It is also reported that if this fan is successful another one 16 ft. in diameter and 8 ft. wide, to be driven by a 125-HP. motor, will be installed, which will be capable to changing the atmosphere of the tunnel, which is 4½ miles long, every half hour. Mr. Clifford also has a contract to supply 150,000 cu. ft. of air a minute for the Spring Valley Coal Co. of Illinois and one supplying 300,000 cu. ft. a minute for the Monongahela Gas Coal Co. at Willock Station, Pa.

ELECTRIC LIGHTING.

CENTRALIA, ILL.

Sealed proposals will be received by the City Council of the City of Centralia, Illinois and opened in open Council meeting at 8 o'clock p. m., on the 7th day of March, A. D. 1899, for furnishing and operating fifty-three or more electric arc lights for street lighting in said city for a period of five years, according to plans and specifications now on file in the office of City Attorney J. J. Bundy.

All bids shall be sealed and endorsed and addressed to M. E. Drum, Chairman. Each bid shall be accompanied by a deposit of $100 or a certified check made payable to A. Saxer, City Treasurer; checks or deposits to be returned as soon as bids are opened and disposed of.

The Council reserves the right to reject any or all bids.

Centralia, Illinois, Feb. 9th, 1899. 8-2t

ELECTRIC LIGHT PLANT.

BALTIMORE, MD.

Proposals, endorsed "Proposal for Electric Lighting Plant at Mount Royal Pumping Station," addressed to the Board of Awards of Baltimore City, will be received at the office of the City Register, City Hall, Baltimore, Md., until 12 o'clock, noon, Wednesday, March 1st, 1899, for furnishing all the materials and labor required for installing a complete electric lighting plant for the Mount Royal Pumping Station, Baltimore.

Copies of the plans and specifications may be obtained at the office of Henry Brauns, Architect, Room 29, Builders' Exchange Building, Baltimore, where explanations of the same will be given by James E. Hewes, Electrical Engineer.

All proposals must be accompanied by a certified check for five hundred dollars ($500), made payable to the Mayor and City Council of Baltimore; and the successful bidder will be required to give satisfactory bond for the faithful performance of the agreement, in amount equal to double the value of the contract.

The Board of Awards reserves the right to reject any or all bids.

By order of the Board of Awards.

WILLIAM L. KENLY,
8-1t Chief Engineer Water Board.

ELECTRIC LIGHT FRANCHISE.

ELIZABETHTOWN, KY.

The City of Elizabethtown, Ky., will receive bids for a franchise to construct and operate an Electric Light Plant in the City for twenty years. Bids must be received by Monday, March 6th, 1899. For particulars address R. L. WINTERSMITH, Mayor.

8-1t

SEWERAGE SYSTEM.

STEELTON, PA.

Sealed proposals, addressed to J. D. Young, Borough Secretary, and properly endorsed, will be received by the Borough Council of Steelton, Pa., until 7:30 p. m., Tuesday, February 28th, 1899, and opened immediately thereafter, for the construction of a system of sewers for the Borough. The work includes the laying of thirteen miles of vitrified pipe sewers including house connections as follows:

15,000	ft. of	4-inch house connections.
42,390	"	8-inch pipe laying.
6,050	"	10-inch " "
1,080	"	12-inch " "
100	"	15-inch " "
100	"	18-inch " "
850	"	20-inch " "
5,500	"	24-inch " "
250	"	12-inch iron pipe laying.
150	"	24-inch iron pipe laying.
144	Manholes.	
20	Flushtanks.	

Specifications and forms of proposal can be secured at the office of the Engineer, 137 Broadway, New York, and can be seen at the Borough Council Chamber, Steelton, Pa., on or after 15th of February, 1899.

A certified check of $5,000.00 made payable to E. C. Keller, Treasurer, without conditions, must accompany each proposal.

The right is reserved to reject any or all bids, or to accept that one which in the judgment of the Council is for the best interest of the Borough.

By order

H. H. CAMPBELL, President.
JNO. D. YOUNG, Secretary.

ALEXANDER POTTER, Consulting Engr.,
137 Broadway, New York City. 6-3t

SEWERS.

NORFOLK, VA.

Sealed proposals will be received at the office of the City Engineer, Norfolk, Va., until 12 o'clock, noon, of the 9th day of March, A. D. 1899, for constructing sewers in the Fifth (or Brambleton) Ward of the City of Norfolk, Va.

Forms of proposals, copies of specifications, approximate schedules of work, and instructions to bidders may be obtained and plans and profiles of proposed work seen at the office of the City Engineer, Norfolk, Va. Each bid must be accompanied by a certified check in the sum of Two Thousand ($2,000) Dollars as a guarantee of the good faith of the bidder, which check will be forfeited as liquidated damages in the event of the failure or refusal of the successful bidder to enter into a contract within two (2) weeks of the date of the awarding the contract to him.

A satisfactory bond in the sum of Twenty Thousand ($20,000) Dollars for the faithful carrying out of the contract will be required.

The right to reject any or all bids is specially reserved.

(Signed) The Local Board of Improvement of Brambleton Ward, Norfolk, Virginia.

7-3t C. J. JONES, President.

WATER-WORKS.

AMSTERDAM, N. Y.

Sealed proposals will be received at the office of the Board of Water Commissioners, Amsterdam, N. Y., until Wednesday, March 1st, 1899, 10 a. m., for the labor for the construction of an extension to the present system of water-works, consisting of about five (5) miles of iron and vitrified pipe from 36, 24, 20, 18 to 6 inch. Also the building of two (2) stone dams and stone fountain.

The work will be divided up into five contracts, and contractors may bid on one or all. Certified check must accompany each bid.

Copy of map and specifications will be on exhibition at the office of the Board, Amsterdam, N. Y., on and after Feb. 10th, 1899.

The right is reserved to reject any or all bids or to accept the one which in the judgement of the board is for the best interests of the city.

JAMES R. SNELL,
S. E. BABCOCK, Superintendent.
Consulting Engineer. 6-3t

RAILROAD CROSSINGS.

WILLIAMSPORT, PA.

Sealed proposals wil be received until 12 o'clock, noon, of Wednesday March 8th, 1899, by the City of Williamsport, Pa., for the construction of the city's portion of an undergrade crossing at the intersection of the Philadelphia & Erie Railroad with East Third St., and for an undergrade foot crossing at the intersection of Pine Street and the Philadelphia & Erie Railroad, in accordance with the provisions of an ordinance approved April 4th, 1898, and an amendment thereto approved July 21st, 1898.

Said crossings at East Third Street contains the following principal approximate quantities: 7,600 cubic yards excavation, 370 cubic yards concrete masonry, 800 lineal feet handrailing, 530 feet 15-inch pipe sewer, 7,000 square feet cement sidewalks, 700 square yards vitrified brick paving relaying, 1,100 square yards new vitrified brick paving, etc.

The foot crossing at Pine Street contains the following principal approximate quantities: 677 cubic yards earth excavation, 127 cubic yards concrete masonry, 118 cu. yds. brick masonry, 13,000 white-glazed brick, 107 lineal feet of handrailing, 408 square feet cement paving, 30 feet 10-in. sewer connection, etc.

Plans and specifications can be seen at the office of the City Engineer.

Separate bids to be made for each crossing, and marked "Proposals for East Third Street Undergrade Crossing," and "Proposals for Pine Street Undergrade Crossing." All bids to be accompanied by a certified check for ten per centum of the amount bid; said sum to be forfeited in case the successful bidder shall fail to execute the contract for the construction of the work, the city reserving the right to reject any and all bids.

GEO. D. SNYDER,
City Engineer.
February 20th, 1899. 8-1t

SEWER CONSTRUCTION.

HONOLULU, H. I.

Sealed tenders will be received at the office of the Minister of the Interior in Honolulu, H. I., till 12 o'clock, noon, of the 15th day of April, 1899, for the following materials for sewer construction, to be delivered in Honolulu:

Portland Cement.....about		6,500 bbls.
Brick	"	470,000
Lumber	"	225,000 ft. B.M.
Sewer pipes—6-in. to 24-in. diameter .....about		60,000 lin. ft.
24-inch riveted steel or wrought iron pipe with flexible joints .....about		2,200 " "
C.-I. manhole covers..about		180

Contractor's plant.
Pumping machinery: 2 6-in. centrifugal pumps; 2 boilers; 2 engines.

Specifications and plans may be seen at office of Superintendent Public Works, Honolulu; also at Hawaiian Consulate, San Francisco, and at office of Rudolph Hering, Hydraulic and Sanitary Engineer, 100 William St., New York.

The Minister does not bind himself to accept the lowest or any bid.

JAMES A. KING,
Minister of the Interior.
February 20th, 1899. 8-2t

BRICK PAVEMENT.

PEORIA, ILL., February 14, 1899.

Sealed bids will be received by the Board of Local Improvements of the City of Peoria, Ill., until two (2) o'clock p. m. of Monday, February 27th, 1899, for furnishing all labor and material for the construction on three streets in said city of about 21,650 sq. yds. of brick pavement, and 2,489 lineal feet of cement curbing, together with about 9,249 cu. yds. of excavation, and setting 10,348 lineal feet of stone curbing, according to the specifications on file in the office of the Department of Public Works.

Proposals must be made out upon blanks furnished by said department, and be accompanied with an amount equal to 10 per cent. of the total amount of the bid in money, or certified check made payable to the order of M. W. Manning, President of the Board of Local Improvements.

For specifications, blank forms of proposal and any information, address the City Engineer.

M. W. MANNING,
President Board of Local Improvements.
A. D. THOMPSON,
City Engineer. 8-1t

PROPOSALS FOR RIP-RAP ROCK AND BRUSH ON UPPER MISSISSIPPI RIVER. U. S. Engineer Office, Rock Island, Ill., Feb. 13, 1899.—Sealed proposals, in duplicate, will be received here until 11 a. m., March 15, 1899, and then publicly opened, for furnishing about 60,000 cubic yards rip-rap rock and about 107,000 cubic yards brush, at various localities between St. Paul and mouth of Missouri River. Information furnished on application. CAPT. C. McD. TOWNSEND, Engr. 8-3t

PROPOSAL FOR FURNISHING PORTLAND CEMENT. Office of the Commissioners, D. C., Washington, February 14th, 1899.—Sealed proposals will be received at this office until 12 o'clock m., March 11, 1899, for furnishing 20,000 barrels, more or less, of PORTLAND CEMENT. Specifications, blank form of proposal and all necessary information may be obtained at this office. Parties applying for form of proposal must name this paper. JOHN B. WIGHT, JOHN W. ROSS, LANSING H. BEACH, Commissioners, D. C. 8-1t

U.S. ENGINEER OFFICE, 537 Congress St., Portland, Me., Jan. 19, 1899.—Sealed proposals for furnishing and setting up ELECTRIC LIGHTING PLANT at Fort Preble, Me., will be received here until 12 m., March 6, 1899, and then publicly opened. Information furnished on application. S. W. ROESSLER, Major, Engrs. 6-4t

SEALED PROPOSALS will be received at the office of the Light-House Engineer, Baltimore, Md., until 12 o'clock M., March 15, 1899, and then opened, for furnishing the material and labor of all kinds necessary for the completion and delivery of the METAL WORK for Hooper Island Light-House, Md., in accordance with specifications, copies of which, with blank proposals and other information may be had upon application to W. A. JONES, Lieut.-Colonel, U. S. A. 7-2t

FORT HAMILTON, N. Y. H., February 13, 1899.—Sealed proposals, in triplicate, will be received here until 12 M., March 14, 1899, and then opened, for putting in additional PLUMBING conveniences at this post. Information furnished upon application. U. S. reserves right to reject any or all proposals. Envelopes containing proposals should be marked "Proposals for additional plumbing" and addressed E. F. McGLACHLIN, 1st Lt., 5th Art'y, Q. M. 7-4t

SANITARY DISTRICT OF CHICAGO.

TO CONTRACTORS,

Sealed proposals addressed to the Board of Trustees of the Sanitary District of Chicago and indorsed:

"Proposals for erecting the substructure and the superstructure of a railroad bridge crossing the Chicago river near Taylor street, and also a bridge for Taylor street across the same river, all in the city of Chicago," will be received by the Clerk of the said Sanitary District, at room 1110 Security building, Chicago, Ill., until 12 m. (standard time) of Monday, the 10th day of April, A. D. 1899, and will be publicly opened by said Board of Trustees at a meeting of the Board held that day.

The railroad bridge for which said tenders are invited is a two (2) track structure for the use of the Chicago Terminal Transfer Railroad Company, and the street bridge will be a structure with roadway eighteen (18) feet wide and sidewalks five (5) feet wide each.

The work for which said tenders are invited includes supplying all materials for the substructures and superstructures of said bridges and erecting them completely, according to plans furnished by the Sanitary District of Chicago on designs prepared under the Scherzer Rolling Lift Bridge patents and in conformity with specifications furnished by the said district.

The designs for said bridges are owned and controlled by said Sanitary District of Chicago.

Each bid for the railroad bridge must be accompanied by a certified check or cash to the amount of four (4) thousand dollars, and each bid for the street bridge must be accompanied by a certified check or cash to the amount of fifteen (15) hundred dollars.

All certified checks must be drawn on some responsible bank doing business in the city of Chicago and be made payable to the order of the Clerk of the Sanitary District of Chicago. Said amount of four thousand ($4,000) dollars for the railroad bridge will be held by the Sanitary District until all of the bids for said structure have been canvassed and the contract awarded and signed, the return of said check or cash being conditioned upon the appearance within ten (10) days after receiving notice of award to him of the bidder to whom the award of said work shall have been made, with bondsmen, and executing a contract with the Sanitary District for the work so awarded, and giving a bond satisfactory to the Board of Trustees for the fulfillment of the contract, the amount of said bond to be thirty-five thousand ($35,000) dollars.

The amount of fifteen hundred ($1,500) dollars deposited with bid for the street bridge will be held by the Sanitary District until all of the bids for said structure have been canvassed and the contract awarded and signed, the return of said check or cash being conditioned upon the appearance within ten (10) days after receiving notice of award to him of the bidder to whom the award of said work shall have been made, with bondsmen, and executing a contract with the Sanitary District for the work so awarded, and giving a bond satisfactory to the Board of Trustees for the fulfillment of the contract. The amount of said bond to be fifteen thousand ($15,000) dollars.

All bids must be upon blank forms furnished by the Sanitary District.

No bid will be considered unless the party making it shall furnish evidence satisfactory to the Board of Trustees of his experience in this class of work, and his financial ability successfully to prosecute the said contract in case the same shall be awarded to him.

Bidders are required to state in their bids their individual names and places of residence in full.

The said Board of Trustees reserves the right to reject any and all bids.

THE SANITARY DISTRICT OF CHICAGO.
By WILLIAM BOLDENWECK,
President of Its Board of Trustees.
Attest: JOSEPH H. HAAS, Clerk.
Chicago, Feb. 8, 1899.

NOTE.

The above advertisement is a substitute for the advertisement dated Dec. 21, 1898, relative to two bridges of the Scherzer Rolling Lift Bridge type to be erected across the Chicago river. The advertisement above referred to is hereby cancelled. 8-1t

SEALED PROPOSALS will be received at the office of the Light-House Engineer, Baltimore, Md., until 12 o'clock M., March 15, 1899, and then opened, for furnishing the material and labor of all kinds necessary for the erection and delivery of the HOOPER ISLAND LIGHT-HOUSE, Md., in accordance with specifications, copies of which, with blank proposals and other information may be had upon application to W. A. JONES, Lieut.-Colonel, U. S. A. 7-2t

U. S. ENGINEER OFFICE, Army Building, New York, Feb. 8, 1899.—Sealed proposals, in triplicate, for furnishing American Portland CEMENT at Forts Schuyler and Totten, N. Y., will be received here until 12 M., March 10, 1899, and then publicly opened. Information furnished on application. H. M. ADAMS, Major, Engrs. 7-4t

PROPOSALS FOR FURNISHING CAST-IRON WATER PIPE. Office of the Commissioners, D. C., Washington, D. C., Feb. 8, 1899. Sealed proposals will be received at this office until 12 o'clock m, March 11th, 1899, for furnishing cast-iron water pipe. Specifications and blank forms of proposals may be obtained at this office. JOHN B. WIGHT, JOHN W. ROSS, LANSING H. BEACH, Commissioners, D. C. 8-1t

Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies READS ENGINEERING NEWS

AVAIL YOURSELF OF THIS PAPER WHEN BIDS ARE WANTED FOR CONSTRUCTION OR FOR FURNISHING SUPPLIES